

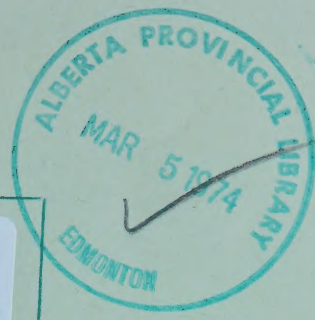
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Quarterly Statistical Review

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APRIL - JUNE 1973

Notes:

Data used in the construction of all figures contained within the Quarterly Statistical Review are available on request from research and planning.



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TUBERCULOSIS CONTROL IN ALBERTA*

Dr. J. Ryder, B. Juchli**

Tuberculosis is an infectious disease caused by the tubercle bacillus. The germ is transmitted by inhalation of airborne organisms disseminated by individuals with active disease of the lungs (pulmonary tuberculosis). Tissues and organs throughout the body (e.g. the kidneys, bones, and glands) may also be affected (extra-pulmonary or non-pulmonary tuberculosis).

Tuberculosis is a disease of great antiquity. Its clinical picture was accurately described by classical Greek and Roman physicians, and pulmonary tuberculosis (then known as "consumption") was well documented in the Middle Ages.

Development of Treatment and Facilities in Alberta

In 1910 a group of women in Calgary formed a local tuberculosis society and arranged to care for 25 tuberculous patients using donated supplies and free city maintenance. In 1914 the city took over the responsibility of caring for tuberculosis patients and converted the Fever and Smallpox Hospital in Calgary for this use. The federal government in 1917 provided beds for armed forces personnel at Frank and Wetaskiwin.

In 1920 all cases were transferred to the new Central Alberta Sanatorium in Robertson, which had a 175 bed capacity. Sanatorium treatment was based on the principles of physical rest, fresh air, nutritious food, and specific measures to promote local rest of diseased organs (including lung relaxation or lung collapse).

In 1936 the province set up provisions for free treatment of pulmonary tuberculosis; in 1949 this was extended to cover non-pulmonary forms of the disease. The Alberta Tuberculosis Association was formed in 1939. The first mobile X-ray unit conducting screening programs among the general population began in 1940.

With the introduction of streptomycin and para-aminosalicylic acid (PAS) in 1947 and isoniazid in 1951, along with advances in anesthesiology, resectional surgery began to replace collapse procedures. This resulted in an initial increase in surgery as many patients with chronic tuberculosis became operable. As other medications were produced there has been a steady decline in the number of patients requiring surgery and in the average hospitalization period (see Table 1).

The Federal Indian and Eskimo Health Services and the Charles Camshell Indian Hospital were established in 1949. The central tuberculosis registry came into being in 1950. Prior to the opening of the Aberhart Memorial Sanatorium in 1952, tuberculosis had been treated in special sections of Edmonton hospitals.

Improvements in tuberculosis treatment accompanied the decline in prevalence of all forms of tuberculosis (see Figure 1), but the initial decline can be attributed to enhanced socio-economic conditions. This decline was then accelerated by better treatment methods. Complete control over tuberculosis is possible with the medications presently available. However, the problems involved in dealing with people, their insecurity, their lack of responsibility, their addiction to alcohol, or other socio-economic factors, delay the day when there will be a 100 per cent "cure" for tuberculosis.

Age, Sex, and Racial Factors

One has to distinguish between tuberculosis infection and tuberculosis disease. An individual may come in contact with an active case of tuberculosis (source case), pick up the organism, and harbor it without developing the actual disease. The infectivity of the source case (i.e. the number of germs excreted and their virulence) and the resistance of the contact to the development of disease are determining factors.

Infants and pre-school children are recognized as having a low resistance and run a high risk of developing serious complications if infected (e.g. miliary tuberculosis or tuberculous meningitis). Teenagers, particularly the female, again have a low resistance which is apparently associated with pubertal changes. The middle-aged population in general has a high resistance followed by a marked drop in resistance in the older age group.

While the Asiatic, Semitic, and Caucasian races, through centuries of contact with the tubercle bacillus, have developed racial resistance, the Eskimo, North American Indian, and Negro demonstrate a very low resistance when exposed to tuberculosis and are liable to develop advanced tuberculosis more frequently and rapidly.

* Source of data for the construction of tables and graphs:

1. Division of tuberculosis control, health and social development.
2. Historical Summary, Incidence of Notifiable Disease by Province, Number of Cases and Rates, 1924 - 1968, April 1970.

3. Tuberculosis Statistics, Volume I — Tuberculosis Morbidity and Mortality; 1968, 1969, 1970, 1971; Statistics Canada.

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As a result of infection, the individual develops a hypersensitivity to protein substances found in the tubercle bacillus. A skin test (tuberculin test) can be used to determine the presence of allergy, thus indicating infection. A negative skin test implies that the individual has never come in contact with the tubercle bacillus; a positive skin test indicates infection but not necessarily active disease.

Forms of Tuberculosis

Primary tuberculosis is the disease produced by the first infection with tubercle bacilli. It is usually quite mild in its progress. However, if infection is heavy it may lead to various forms of extra-pulmonary disease. The germ becomes widely disseminated throughout the body and may lie dormant, later to become reproductive with the danger of producing active disease (re-infection tuberculosis). Re-infection tuberculosis tends to be chronic and is the usual source of infection for new cases.

Progressive tuberculosis of the lungs (pulmonary) is the most common form of the disease (see Table 2), and has accounted for the greatest frequency of deaths (see Table 3).

The tubercle bacillus may cause disease in many other areas of the body (e.g. the kidney, alimentary tract, bones, joints, etc.). These constitute non-pulmonary or extra-pulmonary forms of tuberculosis.

Testing for Tuberculosis Infection

In Alberta, tuberculin testing (the Mantoux test is recommended) is carried out in schools by health unit staff. The positive reaction rate can be used as an index of the level of unknown active tuberculosis in the area. An increase in the rate in a particular area would prompt an investigation for a possible "source" infection.

Figure 2 demonstrates the results of tuberculin testing among Alberta school children. There has been a decline in the positive reaction rate in school children from 3.49 per cent in 1962 to 1.83 per cent in 1972. Figure 2 also shows an increase in numbers tested and in the number of positive reactors in 1967. This was the first year in which testing of native Indians was recorded by central registry.

B.C.G. Vaccination

B.C.G. (Bacille Calmette Guérin) is a living attenuated vaccine. It stimulates resistance to disease as well as hypersensitivity to tuberculo-proteins. A positive tuberculin reaction therefore results from B.C.G. vaccination.

The vaccine is about 80 per cent effective in preventing the development of active disease as a result of subsequent contact with an open case. It is most effective in preventing serious complications in the young.

B.C.G. has been used on a widespread basis in many of the less developed countries and in some provinces of Canada. Those provinces with a lower incidence of tuberculosis tend to use it selectively. Thus in Alberta it is recommended that it be given to individuals who are at risk, namely to:

1. Hospital personnel and trainees who are non-reactors;
2. Contacts who, three months after exposure to an open case, are non-reactors and are living in a high incidence area or are at greater risk due to other members in the same household having had tuberculosis;
3. Infants who are at risk of contact; and
4. Non-reactors planning to live or work in high incidence areas either in Canada or other countries.

Since January 1973, all Indian newborns and Indian children of kindergarten and grade one age are being vaccinated as they are considered a high risk group. Table 4 indicates the number of Albertans who have been vaccinated with B.C.G. from 1968 to 1971.

In areas of relatively low prevalence, the attack rate is so low among the unvaccinated that the value of vaccination must be weighed against its disadvantages — vaccination induced tuberculin allergy deprives subsequent tuberculin testing of much of its diagnostic value as an indicator of infection.

Preventive Therapy

Preventive therapy (the administration of isoniazid) has evolved over the last 10 years. Patients considered at risk (for example: recent contacts of active cases who show a positive reaction in the Mantoux test; recent converters — those whose reaction to the skin test has converted from negative to positive; known cases of pulmonary tuberculosis (now inactive) who were untreated or received inadequate chemotherapy; reactors with scarring or presumed inactive tuberculosis but no documented history of the disease; selected positive reactors under the age of 18 years; and reactors with special clinical situations) obtain a considerable degree of added security against activation of the disease as a result of such preventive treatment. At the end of 1972, 1,400 people were on preventive treatment, and another 270 were added during the first quarter of 1973.

The Future of Tuberculosis Control in Alberta

The decline in tuberculosis morbidity and mortality rates has resulted in the commonly held belief that the disease is no longer a public health problem in developed countries. However, despite the historical decline in incidence, the number of new active cases has not decreased greatly over the past eight years. In 1965, 347 new active cases were diagnosed. The number has remained above 300 in each year thereafter, with the exception of 1968, when it fell to 287. In 1972 there were 349 new active cases, and 37 previously treated cases suffered re-activation of their disease. Figure 1 (which appeared earlier in this article) and Figure 3 demonstrate Alberta's tuberculosis rates have reached a plateau stage over the last few years.

The tuberculosis problem has been measured in a variety of ways in the past. The mortality rate (the number of deaths per 100,000 population) used to be a reasonably satisfactory index. Figure 4 shows the death rates from all forms of tuberculosis in Canada and selected provinces, and demonstrates the decline. Today no one really needs to die of tuberculosis, and this index is of little value, at least in the developed countries. The morbidity (the incidence of the disease, or the number of people who develop tuberculosis in a specific year) and its rate are better indices of the problem and are shown in Figures 1 and 3.

Alberta's Indian population constitutes less than five percent of the total population of Alberta but contributes 40 per cent of the new active cases (see Table 5).

Tuberculosis control involves:

1. Locating active cases — individuals who can transmit the disease (usually designated "source case");
2. Investigating those in contact with active cases to determine if they are infected;
3. Identifying individuals who are at risk of developing tuberculosis by using skin-testing procedures;
4. Organization of treatment services — in-patient, out-patient, preventive and active; and
5. Providing a follow-up service for all known cases of tuberculosis.

The division of tuberculosis control operates in an advisory capacity to the various local health authorities — by providing diagnostic and out-patient services; by distributing educational materials; by arranging the admission of patients recommended for in-patient treatment; by maintaining a central registry of known cases; and by directing a preventive treatment program.

As 40 per cent of the new active cases are diagnosed by the family physician, usually following hospital admission (see Figure 5), two major responsibilities of the division are maintaining liaison with the physician, and a continuing program of education and assistance to hospitals in the organization of their control and case-finding program.

The study of those in contact with active cases is conducted by local health authorities who report their findings and skin testing results, and refer the chest x-rays to the division of tuberculosis control for further action. About 20 per cent of the new active cases are discovered on these contact follow-up programs.

The Baker Memorial Sanatorium in Calgary and the Aberhart Hospital in Edmonton maintain a total of 189 beds for the treatment of tuberculosis. Out-patient clinics are held in Edmonton, Calgary and 25 other centres throughout the province. X-rays and laboratory studies are made if necessary. Reports are made to the patient and others involved in his treatment.

The central registry maintains a record of all known cases of tuberculosis and their contacts in the province (approximately 40,000). The follow-up program is computerized, with the data processing centre issuing information on a monthly basis for distribution to local health authorities.

A close liaison is maintained between the division and the Alberta Tuberculosis and Respiratory Disease Association which assists in educational programs of the division and provides social and rehabilitation services. Manpower and immigration, health and welfare Canada (through its medical services branch — Alberta region), veterans affairs, the workman's compensation board and various other departments and agencies are involved with the division of tuberculosis control.

TABLE 1

**FREQUENCY OF SURGERY AND AVERAGE HOSPITALIZATION PERIOD,
FOR TUBERCULOSIS, ALBERTA, 1962 - 1972**

ITEM	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
Frequency of Surgery (per year)	65	48	29	25	39	36	40	21	14	11	X ¹
Average Hospitalization Period (in days) ²	175.7	201.7	188.8	188.5	169.7	168.4	157.5	131.1	124.4	92.7	92.1

¹ 1972 data not available

² refers to all hospitalized tuberculosis cases

TABLE 2

**DISTRIBUTION OF NEW ACTIVE CASES BY PULMONARY AND
NON-PULMONARY TUBERCULOSIS, ALBERTA, 1961 - 1972***

Year	Pulmonary		Non-Pulmonary		Total Cases	
	# of Cases	% of Total	# of Cases	% of Total	# of Cases	% of Total
1961	305	75.9	97	24.1	402	100.0
1962	302	80.1	75	19.9	377	100.0
1963	276	80.5	67	19.5	343	100.0
1964	248	78.2	69	21.8	317	100.0
1965	267	76.9	80	23.1	347	100.0
1966	257	82.9	53	17.1	310	100.0
1967	269	80.1	67	19.9	336	100.0
1968	220	76.7	67	23.3	287	100.0
1969	291	84.8	52	15.2	343	100.0
1970	267	79.0	71	21.0	338	100.0
1971	255	82.8	53	17.2	308	100.0
1972	295	84.5	54	15.5	349	100.0

* Decreasing overall trend due to better treatment of primary and non-pulmonary forms of infection.

TABLE 3

**INCIDENCE AND MORTALITY FROM ALL FORMS OF TUBERCULOSIS AND PROPORTIONATE
MORTALITY FROM RESPIRATORY TUBERCULOSIS, ALBERTA, 1940 - 1970**

Year	Deaths from All Forms of TB	Rate Per 100,000	Deaths from Respiratory TB	% of Total TB Deaths	Rate Per 100,000
1940	321	40.6	232	72.3	29.4
1941	329	41.3	254	77.2	31.9
1942	271	34.9	214	78.9	27.6
1943	294	37.5	224	76.2	28.5
1944	291	36.0	229	78.7	28.3
1945	263	32.5	200	76.0	24.8
1946	302	37.6	233	77.2	29.0
1947	263	31.9	215	81.7	26.1
1948	259	30.3	200	77.2	23.4
1949	211	23.8	156	73.9	17.6
1950	171	18.7	135	78.9	14.3
1951	146	15.5	119	81.5	12.7
1952	125	12.8	91	72.8	9.4
1953	68	6.7	51	75.0	5.0
1954	63	6.0	45	71.4	4.3
1955	81	7.4	64	79.0	5.9
1956	43	3.8	36	83.7	3.2
1957	63	5.9	60	88.2	5.2
1958	44	3.7	35	79.5	2.9
1959	44	3.5	37	84.1	3.0
1960	34	2.7	27	79.4	2.1
1961	32	2.4	27	84.4	2.0
1962	30	2.2	24	80.0	1.8
1963	37	2.6	30	81.1	2.1
1964	32	2.2	26	81.2	1.8
1965	31	2.1	26	83.9	1.8
1966	33	2.2	29	87.9	2.0
1967	33	2.2	31	93.9	2.1
1968	24	1.6	18	75.0	1.2
1969	20	1.3	14	70.0	0.9
1970	13	0.8	12	92.3	0.8

TABLE 4

PERSONS RECEIVING BCG VACCINATIONS, ALBERTA, 1968 - 1971

Category	1968	1969	1970	1971
Nurses	1288	1379	933	1301
—Graduate	5	5	3	7
—Student	740	900	491	628
—Other Nursing Personnel	543	474	439	666
Other Hospital Personnel	52	35	25	111
Medical Students	80	20	10	38
Indians and Eskimos	329	—	—	163
—Newborn	28	—	—	4
—Adults and Children	301	—	—	159
All Other Persons	162	54	63	74
—Newborn Contacts	—	—	—	—
—Adults and Children, Contacts	9	2	1	10
—Newborn, Not Contacts	—	—	1	—
—Adults and Children, Not Contacts	153	52	61	64
—Unspecified	—	—	—	—
TOTAL	1911	1488	1031	1687

TABLE 5

INCIDENCE OF TUBERCULOSIS AMONG NATIVE INDIANS,
CANADA AND ALBERTA, 1968 - 1971

CANADA				ALBERTA			
New Active Cases				New Active Cases			
Year	# Of Native Indian Cases	Total Cases	% of Total Cases Accounted for by Native Indians	# of Native Indian Cases	Total Cases	% of Total Cases Accounted for by Native Indians	% of Canada's Indian Cases Accounted for by Alberta Native Indians
1968	455	4824	9.4	92	274	33.6	20.2
1969	527	4438	11.9	160	339	47.2	30.4
1970	462	3920	11.8	143	333	42.9	31.0
1971	425	3943	10.8	120	300	40.0	28.2

FIGURE 1

TRENDS OF TUBERCULOSIS IN ALBERTA, 1958 - 1972

RATE
PER
100,000
POPULATION

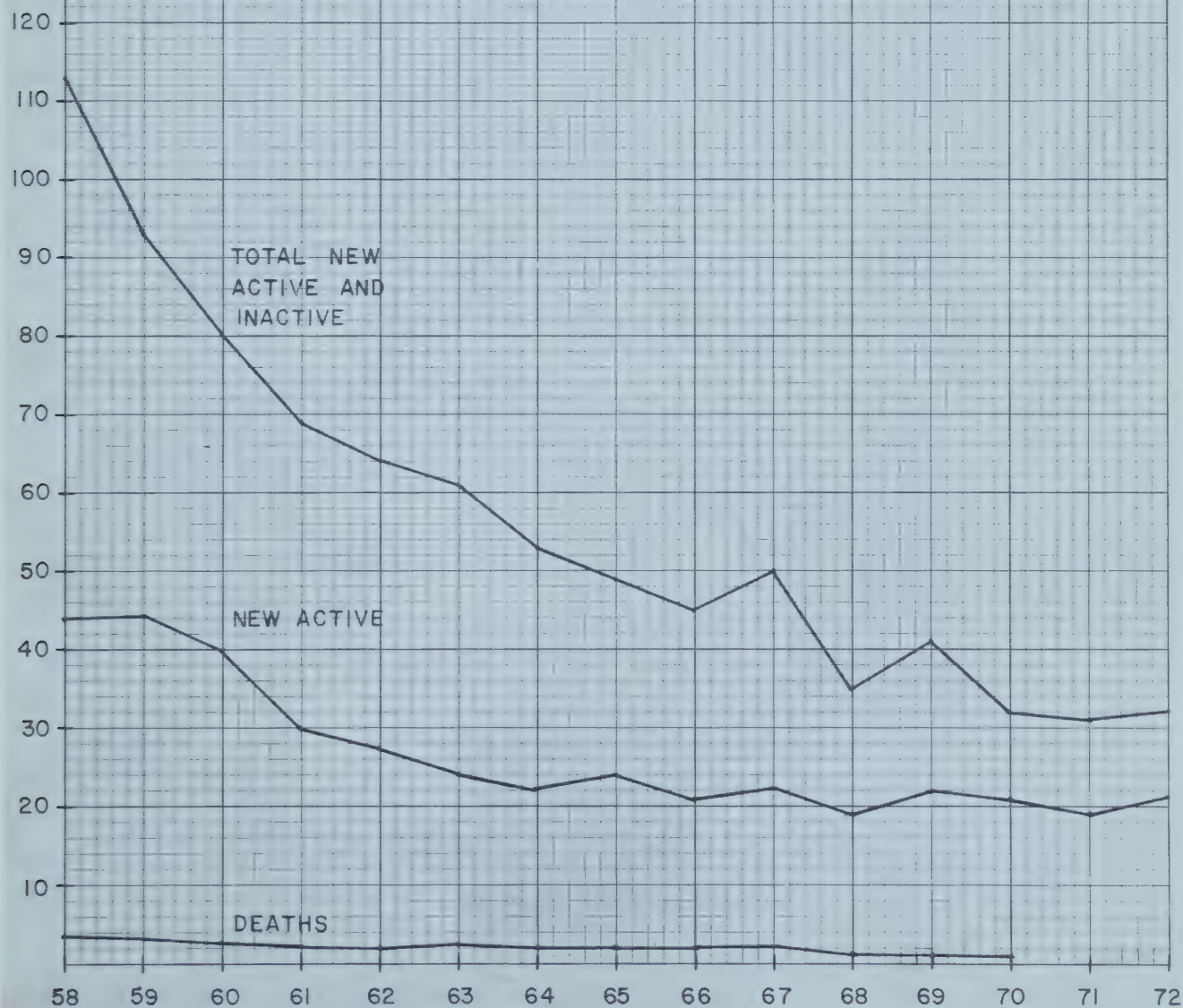
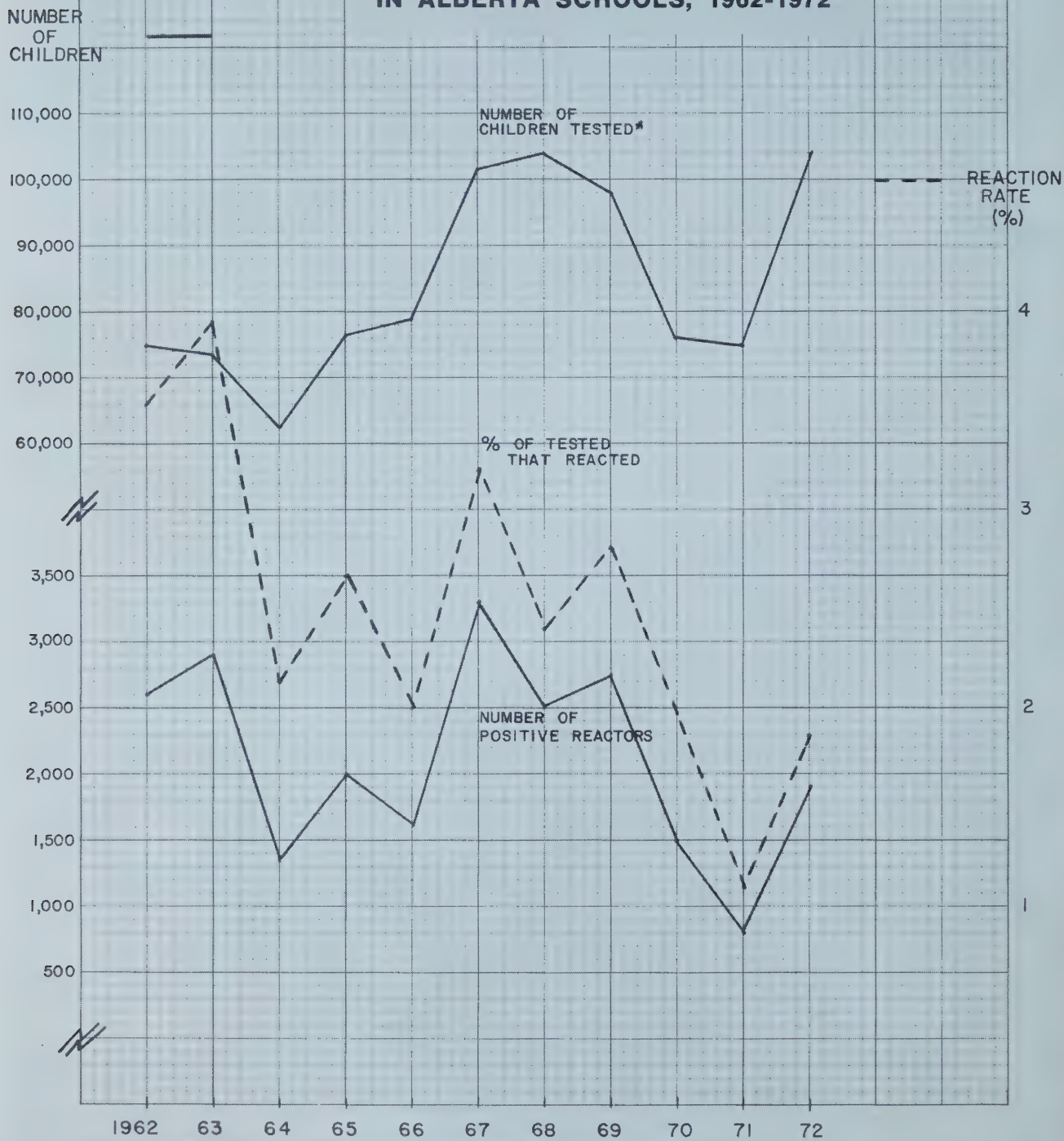


FIGURE 2

RESULTS OF TUBERCULIN TESTING IN ALBERTA SCHOOLS, 1962-1972*

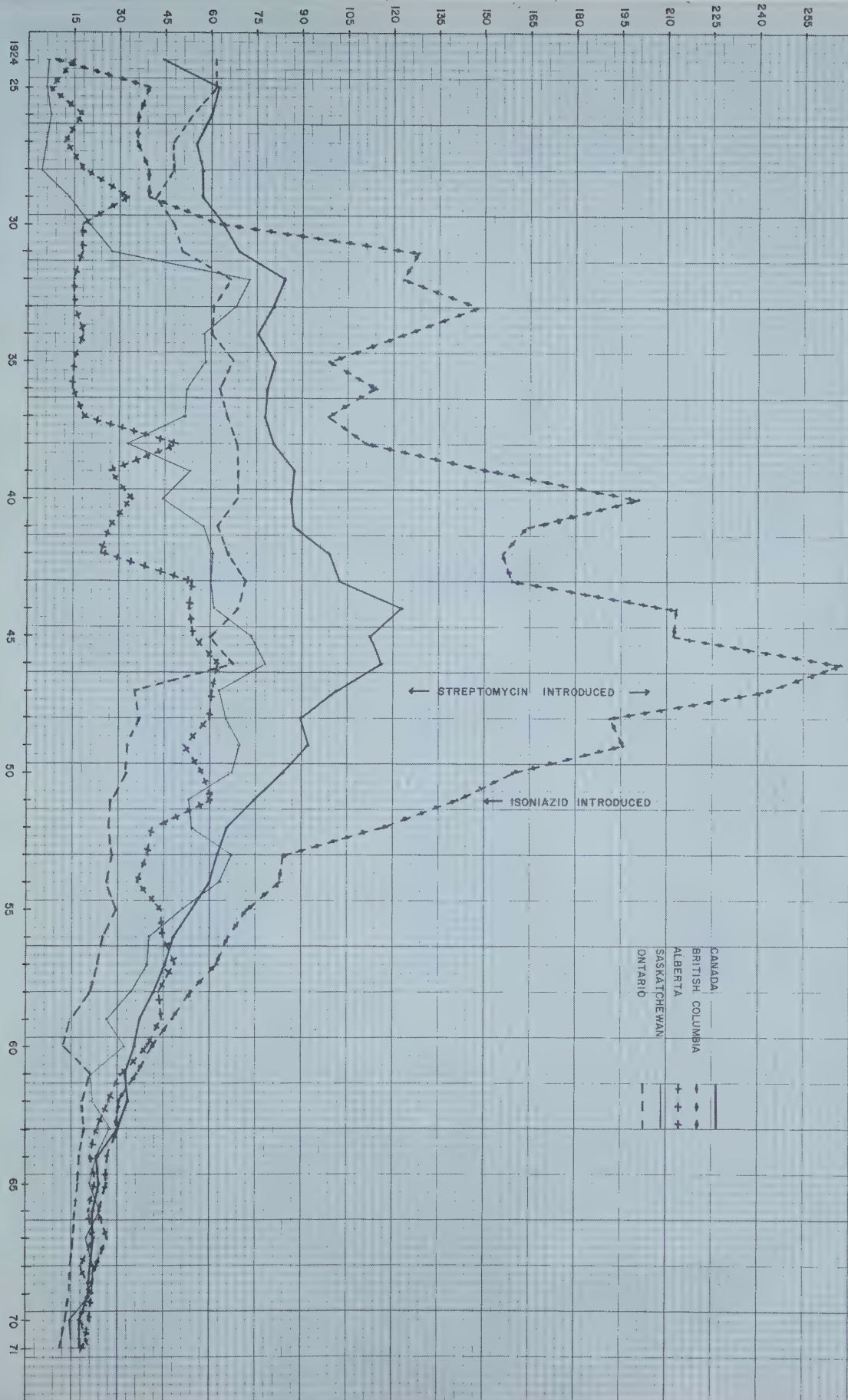


*STARTING 1967, TESTING OF NATIVE INDIAN CHILDREN INCLUDED IN FIGURES

RATE PER
100,000
POPULATION

FIGURE 3

INCIDENCE OF NEW ACTIVE CASES OF ALL FORMS
OF TUBERCULOSIS,
CANADA AND SELECTED PROVINCES, 1924-1971



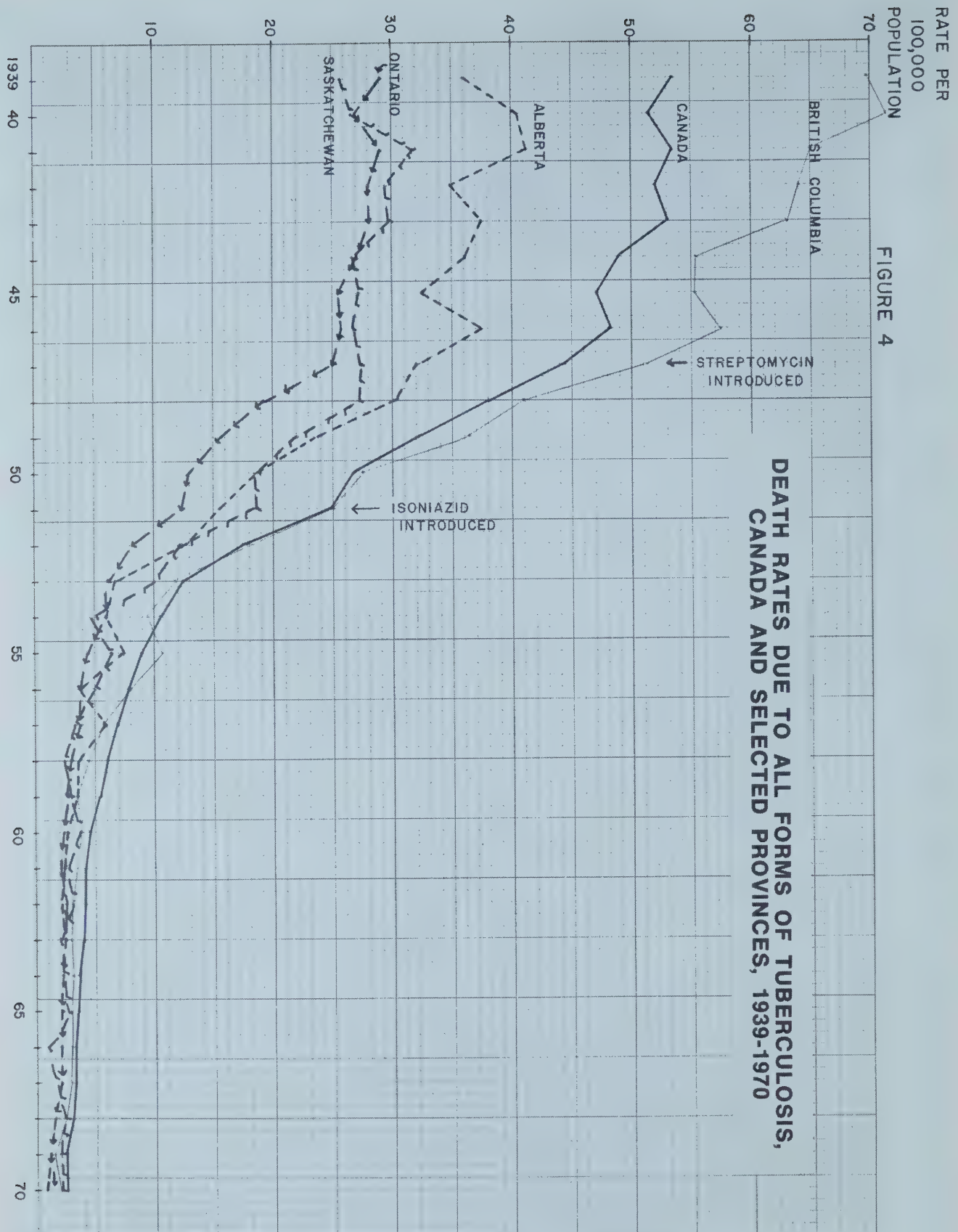
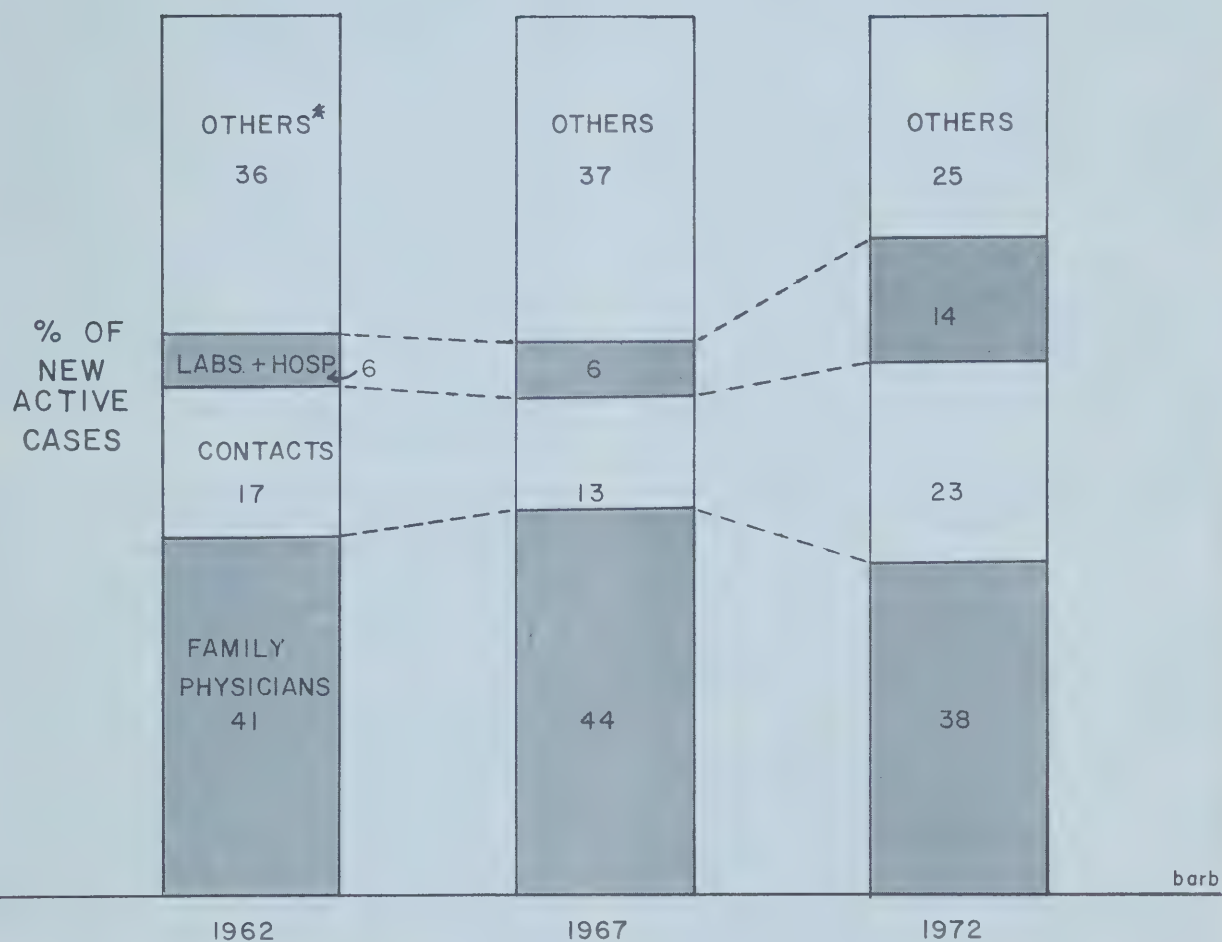


FIGURE 5

**SOURCE OF DISCOVERY OF NEW
ACTIVE CASES, ALBERTA, 1962, 67, 72**



*"OTHERS" INCLUDES SCHOOL AND MASS SURVEYS, X-RAYS, CORRECTIONAL INSTITUTES, MOBILE UNITS, AND HEALTH AND WELFARE CANADA

AN AGRICULTURAL ACCIDENT SURVEY IN ALBERTA, 1970

Reprinted from the January/February 1973 issue,
Canadian Journal of Public Health

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A method of surveying agricultural accidents is described. The technique involves initiating a report form when medical treatment is begun and completion of the questionnaire by a public health nurse during a home visit.

For twelve months continuous reporting was maintained in the Barrhead-Westlock area and 103 accidents were investigated. The epidemiological features of these accidents are reported. Total incidence was 3.65 accidents per 100 farms per year.

Canada has one of the world's highest recorded accident fatality rates, being exceeded by only five other countries. For more than half of their lives, Canadians are more likely to die from accidents than from any other cause (1). Farming is still a relatively hazardous occupation; deaths from machinery accidents have not fallen despite a decreasing farm population (Tables I and II). The fatality rate for machinery accidents on farms increased 68 per cent from an average of 3.50 per 100,000 farm population in 1951-1955 to an average of 5.89 in 1966-1970. Tractors are involved in the majority of fatal accidents: most of these are preventable by correct operation and the use of frames and cabs of sufficient strength (2). It may be noted that the number of tractors increased by 59 per cent between 1951 and 1970: mechanization has its price.

However, fatalities alone usually fail to reflect a true picture of the pattern of accidents in a community (3). The importance of agricultural accidents lies also in the sickness and disability they cause. In their study in Saskatchewan, Huston and Smith (4) found that compared to road accidents there were few fatalities but, as a cause of injury requiring hospital admission or outpatient treatment, farm accidents approached the problem of road accidents in importance. This comparison neatly brings a hidden problem into perspective; and it points to the need for continuous surveillance and investigation of accidents, using the standard epidemiological principles which aim to identify the characteristics of host, agent and environment, and to establish the sequence of events before, during and after the accident. The information derived can then be fed to a community safety organization so that preventive measures can be instituted (Figure 1).

Some unique and peculiar features of agricultural accidents must be borne in mind. The Royal Commission on Farm Machinery (5) pointed out that the interaction between man and machine within the farm environment differs from that in industry in several respects: the farmer is usually his own manager; hired labour has no group organization to press for better working conditions; there are often no comparable compensation arrangements; the farm family, including the very young and the aged, are exposed to the dangers of machinery; farms are often isolated from repair services and from medical facilities; the nature of agriculture demands that at certain times of the year long hours have to be spent in repetitive-type work in conditions of heat, noise, vibration and cramped position: and, because of the marginal economy of some farms, makeshift repairs are often tolerated.

Local epidemiological studies have been made in several provinces but not previously in Alberta, except for an engineering study concerning tractor accidents on public roads in 1965 (6). Huston and Smith (4) emphasized the lack of attention agricultural accidents have received in Canadian medical journals, and this despite the importance of agriculture to the Canadian economy. Such reports as have appeared in North America (4, 7-10) have generally shown a high incidence of permanent and severe injury, with children the most susceptible group, the peak season for injury coinciding with spring and late summer activity, the peak times around 11.00 and 17.00 hours, and fairly equal distribution of accident site among (1) fields, (2) farm buildings, (3) the farmhouse and (4) rural roads and highways.

For the most part, specially trained observers have been used in these surveys but such methods are clearly difficult and costly to sustain over a long period. A study in progress in Saskatchewan is using computer analysis of physician services rendered to a random sample of farmers (11) and there are many interesting papers on the cause and prevention of tractor accidents (6, 12-15).

The Barrhead-Westlock Survey

The purpose was to develop a simple method of studying the epidemiological features of agricultural accidents in this area of mixed farming in the parkland region of Alberta, 50 miles northwest of Ed-

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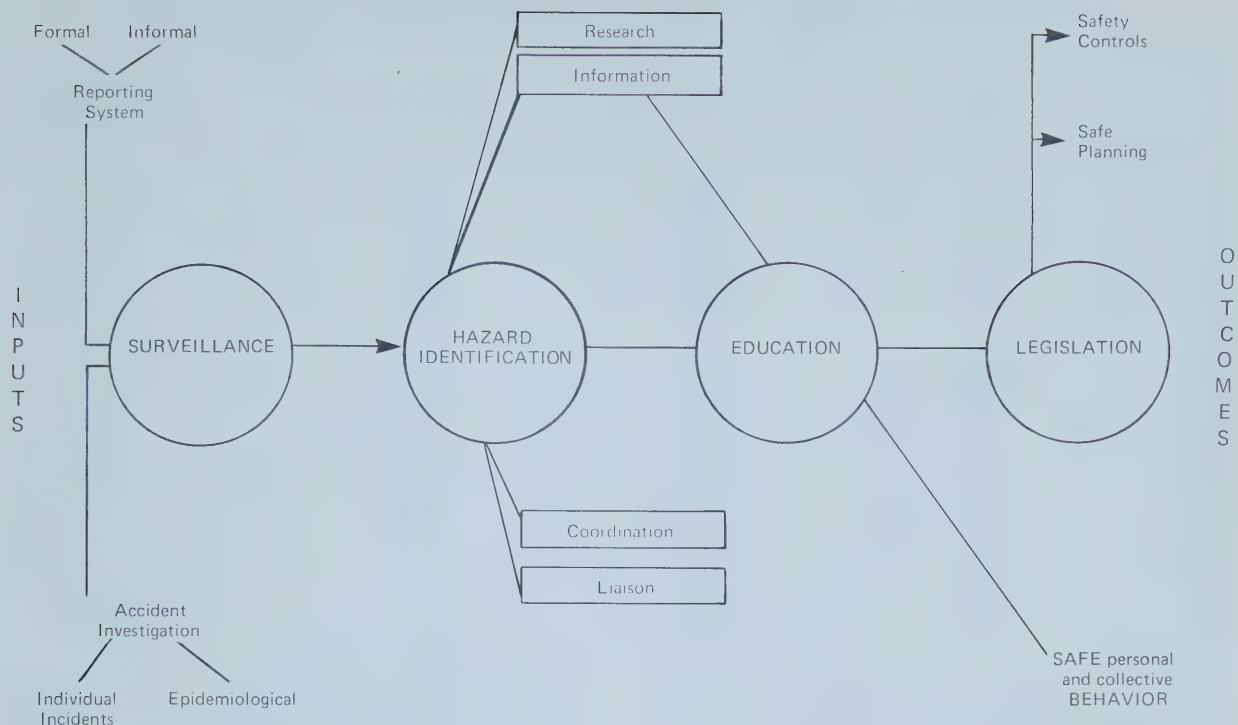


Figure 1: Model Components of a Community Safety Organization

monton. Total population of the area is 18,482 with 12,845 living in the rural districts. There are 2,642 farm operators and 10,520 farm residents. Westlock is the larger of the two areas with some 55-60 per cent of the farming operations, though more cattle are raised in Barrhead (Table III).

The method was to initiate a report form when medical treatment was begun at a clinic or hospital. The questionnaire was to be completed by the public health nurse who would make one or more home visits or telephone calls until the outcome of the accident was clear. A satisfactory form design was reached after a one-month trial. It included personal data, a description of the circumstances and nature of the injury, essential features of treatment and the extent of resulting disability. The reverse side of the form was used for the comments of the physician, public health nurse and patient, and a summary by the Medical Officer of Health.

The latter, with the admitted benefit of hindsight, categorized the accidents according to their 'preventability' as follows:

1. Completely preventable — gross negligence in maintenance, operation or behaviour.
2. Possibly preventable — lack of appropriate care in maintenance, operation or behaviour; or the circumstances of the accident might reasonably have been avoided.

3. Unpreventable — appropriate care had been taken: or unforeseeable circumstances had occurred.

4. Unassessable.

He attempted further to classify the reasons for mechanical or operator failure, without necessarily implying blame:

- A. Lack of knowledge — ignorance of potential changes or safety procedures.
- B. Misjudgement — inaccuracy in cognitive or motor function.
- C. Carelessness — minor degrees of negligence, thoughtlessness or lack of concern.
- D. Blatant disregard of safety rules — contempt for or conscious neglect of previously learned rules of safety or of clear warning signs.

Mechanical failure sometimes proved to be the result of operator failure, as in neglect of routine maintenance; and the person to whom failure was attributed was not always the person injured.

The co-operation of the five medical clinics, two hospitals and R.C.M.P. was obtained; in most cases records staff transcribed information from the case-notes to the report form. The Alberta Safety Council assisted with liaison and publicity.

**Table I: Farm Machinery Fatalities, Farm Population and Tractor Numbers in Canada,
1951 - 1970**

Year	Farm Tractors '000	Farm Population '000	Farm Machine Fatalities	Fatalities per Unit Population '00,000
1951	399.6	2,892	100	3.46
1952	426.1	2,860	109	3.81
1953	449.9	2,829	89	3.14
1954	466.1	2,797	96	3.43
1955	483.2	2,765	101	3.65
1956	499.5	2,734	95	3.48
1957	508.7	2,610	84	3.22
1958	518.5	2,487	90	3.61
1959	528.9	2,364	97	4.11
1960	539.3	2,241	85	3.79
1961	549.3	2,117	91	4.29
1962	558.4	2,084	96	4.62
1963	568.0	2,051	98	4.78
1964	577.6	2,018	113	5.59
1965	586.9	1,984	136	6.87
1966	597.9	1,951	136	6.97
1967	607.9	1,918	102	5.32
1968	617.3	1,885	100	5.30
1969	627.0	1,852	110	5.94
1970	636.7	1,819	107	5.88

Source: Figures supplied by Statistics Canada from published and unpublished material. Figures for census years 1951, 1956, 1961 and 1966 are published for: Farm Tractors — "Census Bulletin, Data on Census Farms and Commercial Farms"; Farm Population — "Census Bulletin, Farm Population, Tenure, Age

and Residence of Farm Operators," Farm Machinery Fatalities — "Accident Facts," annual bulletin published by the Canada Safety Council in co-operation with Statistics Canada. Figures for intercensal years for farm tractors and population are based on straight-line interpolation.

Table II: Farm Machinery Fatalities — by Province and Age of Victim — Canada 1969

Province	Sex	Age									Total
		1-4	5-9	10-19	20-29	30-39	40-49	50-59	60-69	70+	
P.E.I.	M	—	—	—	—	—	—	—	—	—	—
	F	—	—	1	—	—	—	—	—	—	1
N.S.	M	—	—	1	—	—	1	—	—	—	2
	F	—	—	—	—	—	—	—	—	—	—
N.B.	M	—	—	2	—	—	—	1	1	—	4
	F	—	—	—	—	—	—	—	—	—	—
Que.	M	3	1	11	2	2	5	9	1	1	35
	F	1	2	—	—	—	—	—	—	—	3
Ont.	M	5	2	4	3	4	4	2	3	1	28
	F	—	—	—	—	1	—	—	—	—	1
Man.	M	—	—	—	2	—	1	2	—	1	6
	F	—	—	—	—	—	—	—	—	—	—
Sask.	M	—	1	2	2	2	1	3	3	1	15
	F	—	1	—	—	—	—	—	—	—	1
Alta.	M	—	—	—	—	3	1	2	1	—	7
	F	2	1	—	—	—	—	—	—	—	3
B.C.	M	—	—	3	1	—	—	—	—	—	4
	F	—	—	—	—	—	—	—	—	—	—
Total		11	8	24	10	12	13	19	9	4	110

Source: Statistics Canada (Vital Statistics Section).

Table III: Agricultural Economics (information derived from 1966 census)

		County of Barrhead	Municipal District of Westlock	Total
Farm operators	No.	1,146	1,496	2,642
Persons living on Farms	No.	4,873	5,647	10,520
Total area farmed	Acres	460,849	605,221	1,066,070
Average area per farm	Acres	402	380	391
Improved land	Acres	291,721	425,812	717,533
Crops	Acres	206,204	292,251	498,455
Size of farms				
Less Than 70	Acres	34	25	59
70-759	Acres	1,001	1,443	2,444
760 and over	Acres	111	123	234
Total	Acres	1,146	1,591	2,737
Tractors	No.	1,842	2,192	3,034
Combines	No.	656	879	1,535
Electric power installed	No.	987	1,173	2,160
Cattle	No.	43,595	32,607	76,202
Pigs	No.	31,974	44,736	76,710
Sheep	No.	3,959	4,345	8,304
Hens and chickens	No.	132,279	236,484	369,763

An agricultural accident was defined as any accident for which medical attention was sought which occurred on a farm or to a person engaged in an agricultural occupation at the time of the accident. Accidents to non-farmers (e.g. children) were included if they happened on the farm but all domestic accidents (i.e. in the farmhouse) were excluded. The survey lasted from January 1 to December 31, 1970.

ding to age. Fifty-eight of the injured were themselves farmers, 19 were students and 12 were housewives (Table V); of the remaining 14, five were helping with the farming operation at the time of injury.

Table IV: Age-Sex Distribution of Persons Injured.

Age	Male	Female	Total	%
0-9	5	2	7	6.8
10-19	18	2	20	19.4
20-34	19	4	23	22.3
35-59	34	8	42	40.8
60+	11	—	11	10.7
Total	87	16	103	100.0
(%)	(84.5)	(15.5)	(100.0)	

Results

In the twelve-month period 103 accidents were reported, a rate of 3.65 per 100 farms per year. Sixteen (15.5%) of the injured were females (Table IV) and a similar number were children under 15 years of age. The adults were uniformly distributed accor-

Table V: Nature of Injury According to Occupation

Type of Injury	Farmers	Wives	Occupation				Total	(%)
			Temporary Help	Children & Students	None or Retired	Not Known		
Laceration	19	2	3	7	5	0	36	(35.0)
Fracture	10	1	0	1	0	0	12	(11.6)
Contusion	5	1	0	3	0	0	9	(8.7)
Sprain or strain	4	1	0	2	0	0	7	(6.8)
Crush	3	2	1	1	0	0	7	(6.8)
Superficial	4	0	0	1	0	0	5	(4.8)
Puncture	1	2	1	1	0	0	5	(4.8)
Dislocation	2	1	0	0	0	0	3	(2.9)
Foreign body	2	0	0	0	0	0	2	(1.9)
Burn	1	0	0	0	0	1	2	(1.9)
Amputation	1	0	0	1	0	0	2	(1.9)
Intracranial	0	0	0	0	0	1	1	(1.0)
Poisoning	0	0	0	0	1	0	1	(1.0)
Strangulation	1	0	0	0	0	0	1	(1.0)
Multiple	4	1	0	1	0	0	6	(5.8)
Other	1	1	0	1	1	0	4	(3.9)
Total	58	12	5	19	7	2	103	(100%)

There were 25 accidents in each of the two-month periods May-June, July-August and September-October. In the six winter months there was a total of 28 accidents; of the 10 accidents in the year which took place in animal enclosures or feedlots, nine occurred during this period. In the summer, the majority of accidents occurred in fields (35) and yards or driveways (29) (Table VI). Peak accident frequency was between 16.00 and 19.00 hours, followed by 09.00 - 12.00 hours. None of the injured persons had been working an excessive number of hours; 34 accidents (33.0%) occurred within an hour of beginning work. Forty-nine of the injured were alone at the time of the accident. Adverse weather factors were noted in 19 of the incidents.

Among the types of injury, lacerations (36), fractures (12), contusions (9) and crush injuries (7) predominated (Table V). The site of injury was the wrist or hand in 41 cases (39.8%), the hip or leg in 26 (25.2%), the head or neck in 11 (10.7%); only 9 (8.8%) involved the trunk (Table VII).

Machinery was concerned in 52 accidents (50.4%). Of these incidents 15 involved augers, 13 tractors, six combines, six power take-offs, four balers and four mowers. Three of the auger accidents occurred when the cranking handle ratchet slipped, causing the handle to fly round. Sixteen injuries, two of which were fatal, occurred during the loading or unloading of grain, seven while repairing machinery and six while baling. Fifteen injuries (14.6%) involved cows, six while milking; one horse and one sheep were involved in others.

First-aid was given to only eleven persons. Thirty-four were admitted to hospital; 16 required a general anaesthetic, 13 an operation, 28 immobilization, 42 suture, 16 an antibiotic and two removal of a foreign body. With regard to immunization status of the persons injured, only 22 persons (21.4%) were fully protected against tetanus (complete course of toxoid within five years); most of these were students. A further eight persons (7.8%) were partially protected. Fifty-nine (57.2%) had received no immunization whatsoever against tetanus; 46 of these persons were farmers.

Table VI: Place of Injury and Season

Place of Injury	Date				Total	%
	Nov.-Apr.	May-June	July-Aug.	Sept.-Oct.		
Home	1				1	(1.0)
Garage or workshop	2				2	(1.9)
Barn	4	1	3	1	9	(8.7)
Granary	1	1			2	(1.9)
Other building			1		1	(1.0)
Animal enclosure or feedlot	9	1			10	(9.7)
Field	5	11	11	13	40	(38.8)
Bush	1				1	(1.0)
Yard or driveway	5	9	9	11	34	(33.0)
Highway			1		1	(1.0)
Other					—	(—)
Not known		2			2	(1.9)
Total	28	25	25	25	103	
%	(27.1)	(24.3)	(24.3)	(24.3)	(100.0)	

Table VII: Cause of Accident by Site of Injury.

Cause of Accident	Site of Injury									Total	(%)
	Head or Neck	Chest	Abdomen	Back	Shoulder or Arm	Wrist or Hand	Hip or Leg	Multiple	Not known		
M.V. (Traffic)							1			1	(1.0)
M.V. (Non-traffic)	1			1	1	4	1			8	(7.8)
Fall	1	1	1	1	2		4	2		12	(11.6)
Falling object	1					2	1			4	(3.9)
Flying object	1						2			3	(2.9)
Machinery	3		1	2	6	25	12	3		52	(50.4)
Animal	2	1			2	5	4			14	(13.6)
Fire										—	(—)
Other	2		1			4	1			8	(7.8)
Not known						1				1	(1.0)
Total %	11(10.7)	2(2.0)	3(2.9)	4(3.9)	11(10.7)	41(39.8)	26(25.2)	5(4.8)	—	103	(100.0)

Table VIII: Centers Reporting Accidents.

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total 1970
Hospitals													
St. Joseph's, Barrhead	0	3	0	0	0	1	4	2	3	2	0	0	15
Immaculata, Westlock	1	2	4	5	4	5	7	6	8	11	4	0	57
Clinics													
Barrhead Clinic, Barrhead	0	0	1	0	1	1	0	0	0	0	0	0	3
Medical Centre, Barrhead	0	0	0	0	0	2	1	5	0	0	0	0	8
Watson Clinic, Barrhead	0	0	1	0	0	2	1	1	0	0	0	0	5
Associate Medical Clinic, Westlock	0	0	2	0	1	1	1	0	0	1	1	0	7
Whissell Clinic, Westlock	0	0	0	1	2	1	2	1	0	1	0	0	8
Summary													
All Hospitals	1	5	4	5	4	6	11	8	11	13	4	0	72
All Clinics	0	0	4	1	4	7	5	7	0	2	1	0	31
All Hospital and Clinics	1	5	8	6	8	13	16	15	11	15	5	0	103

Nineteen (18.4%) of the injuries did not result in any absence from work; 31 (30.1%) injuries resulted in one to seven days' absence, 22 (21.4%) in eight to 30 days' absence and ten (9.7%) caused more than a month's absence from work. Three (2.9%) of the accidents were fatal and two resulted in permanent disability. In 18 the disability was not known.

Assessment

Altogether the medical officer of health assessed 53 (51.5%) of the accidents as completely preventable and 28 (27.2%) as possibly or at least partially preventable. Seventeen were probably not preventable and in five there was insufficient information on which to formulate an assessment. Among possible factors, mechanical failure was cited in six accidents and operator failure in 51, with lack of knowledge in 10 cases, misjudgement in 12, carelessness in 21 and blatant disregard for safety rules in 11. In six instances a child was using or travelling on the machinery in inappropriate circumstances.

Of the 103 accidents, 68 were reported from Westlock and 35 from Barrhead (Table VIII). Although co-operation in reporting was generally good, it is possible that some cases were overlooked. Two such "missed" cases did come to our attention after the survey had closed. Probably the Westlock figures are closest to the true incidence of agricultural accidents brought to medical attention. After reviewing the results of the survey a number of the participating physicians suggested that back injuries and riding accidents might not have been included. They also made the interesting comment that a repeat survey would be of greater value, now that they appreciated more fully the reason for doing it and the type of results to be expected.

Conclusions

The number of accidents in this survey was too small to enable us to form opinions about precipitating factors or to make comparisons with the literature surveyed at the beginning of this paper. In general the type of person involved, the time of day and year, the proportion involving machinery

and animals, the type of injuries and disability and the proportion of accidents thought to be partially or completely preventable, were in accord with the findings in other reported studies, though the total accident rate at 3.65 per 100 farms per year was only 55 per cent of the rate reported in Michigan by trained interviewers furnishing four reports a year for each farm (9).

There is a need to agree on a standard definition for an agricultural accident, and to develop criteria by which characteristics of the operator, circumstances of the accident, and design features of the equipment which have led to or permitted operator failure, can be described.

We have concluded that our method of surveillance for agricultural accidents is effective providing full co-operation can be assured. For the investigation of accidents involving machinery it would be useful to enlist the help of the municipally-employed agricultural fieldmen. Consideration should be given to maintaining a similar survey in several selected health units in the province to obtain meaningful figures and to reveal trends over the coming years.

Finally, we draw attention to the need to upgrade the level of immunization against tetanus in the district. It is significant that a case of tetanus did occur just outside the area surveyed early in 1971, the victim being a farmer who trod on a rusty nail in a dimly-lit chicken coop.

ACKNOWLEDGEMENTS

Thanks are due to all the medical clinics and hospitals in Barrhead and Westlock, the R.C.M.P., Alberta Safety Council, Alberta Department of Agriculture and the local press for their assistance and co-operation. Staff nurses of the Sturgeon Health Unit did the field investigation; Mrs. B. Wiese co-ordinated the study and did the secretarial work; and the Division of Epidemiology, Alberta Department of Health and Social Development, undertook the statistical analysis, Miss Susan McDaniel, M.A., being the Research Officer in charge.

A special note of appreciation is extended to John R. Smiley, Ph.D., Senior Research Officer (Biostatistics) in the Ontario Ministry of Health.

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AN OVERVIEW OF THE DEVELOPMENT OF THE PREVENTIVE SOCIAL SERVICES PROGRAM

Melvin W. Finlay and Stan Cowley

I THE GENERAL HISTORY OF THE PROGRAM

Legislation establishing the preventive social services (PSS) program became effective July 1, 1966. Under the terms of the act the minister of health and social development is empowered to enter into an agreement with a municipality to establish, administer, and operate preventive social service programs. Municipalities may participate singly or jointly; county and municipal district boundaries are respected in determining the geographical size of a particular administrative area.

In 1970, an amendment to the act gave the minister authority to establish and operate programs and projects directly, without municipal participation. This authority has been used sparingly, principally in areas such as improvement districts where there is no municipal government. The only other instances where it has been exercised involved provincially-initiated evaluation of programs.

The act also provides for the province to pay to municipalities "a grant not exceeding 80 per cent of the municipal expenses in connection with the administration of material aid given by the municipality" (social allowance), where the municipality agrees to develop a preventive program. This represented a substantial financial return for larger municipalities, particularly cities, and prompted immediate participation in preventive social services.

Defined in very broad terms the program is designed to facilitate co-operation, joint planning and funding among the provincial government, municipal governments, public, private, and commercial agencies, and consumer groups in the development of a wide range of programs oriented toward individuals and families. Municipal councils are the key decision-making body, having to agree to participate in the program, hire a director to develop the program through citizen groups, approve individual projects for submission to the minister, and administer the funds. Without their commitment the program cannot proceed.

Both volunteers and private non-profit agencies play an important role in prevention. In any given year approximately half of the provincial funds flow through municipalities to private agencies headed by community boards. Costs of programs are lessened considerably through donations of time and materials by hundreds of volunteers. While it is extremely difficult to amass statistics on actual volunteer contribution because of the natural reticence of many people to accurately record their

involvement, a sample study undertaken in 1971 indicated contributions valued at at least \$8,000,000 (almost four times the actual provincial preventive social services budget for that year) by some 23,000 people.

Preventive social services does not operate on the basis of the grant system utilized by most government programs. Whereas the grant system involves specified amounts of money paid on a regular basis according to a fixed rate, preventive projects are supported on a deficit financing basis. Each recovers as much revenue as possible through fees for service charged to users, United Community Funds where applicable, donations, other government funds, and other sources. The province then reimburses municipalities up to 80 per cent of the remainder of expenditures. In those areas having no municipal government, the province pays 100 per cent of the deficit. An increase in actual revenue received over that budgeted results in a reduction of the amount shared by the province and municipality.

For the fiscal year 1966-1967, the total provincial appropriation was \$400,000. In view of the short time period during which the program functioned (nine months), and because many projects were in only preliminary stages of development, available data is of little comparative value. Accordingly fiscal year 1967-1968 is taken as the base year and 1972-1973 as the terminal one in developing the statistical tables which follow.

A concise definition of preventive social services is difficult to achieve. This presents serious difficulties for anyone attempting to evaluate the program. For communities wishing to adopt innovative and novel approaches to strengthening individual and family life it has proven to be a distinct asset.

It has been customary to think of prevention in terms of three points of intervention. Primary prevention is oriented toward education in an effort to improve the ability of individuals, families, and society in general to satisfy human needs before the emergence of problems. Secondary prevention attempts to intervene as soon as possible after the emergence of signs of stress, breakdown, or failure, to decrease the possibility of complicated consequences. Tertiary prevention, more commonly referred to as rehabilitation, aims at re-establishing conditions of capability, and the development of a revised and workable approach on the part of the family or individual to need satisfaction. The parallel to the medical model is obvious.

Actual projects do not clearly fall within these distinctions, however. Day care may be primary prevention for children while secondary prevention for parents. Family counselling services can be offered at each stage, although ideally the point of intervention would be as close to the primary end of the continuum as possible.

Over the long term it is unlikely that such arbitrary distinctions will prove fruitful since people cannot be slotted readily into clearly defined stages of need or development. At best it serves as a reminder to planners, administrators, and decision-makers that preventive social services will never achieve its goal. Always there will be more to be done to facilitate growth and development and to assist individuals and families in realizing their potential. It is axiomatic that as one level of need-gratification is reached, we develop new needs and new wants in an apparently never-ending spiral. The program can be fairly measured, however, on the basis of noticeable reduction in individual and family breakdown, noticeable increase in the number of municipalities wishing to participate voluntarily in preventive social services, and noticeable increase in the number of people participating in program planning and development.

During the time PSS has been operating, a method of classifying projects has gradually evolved. Account must be taken of the open-ended nature of projects — preventive social services has not been, and should not be, precisely defined. Room must be given for alteration and adjustment to existing programs while constantly encouraging novel experimental approaches. Prevention looks much different in Medicine Hat, for example, than it does in High Prairie, and different again in Vermilion. That too is one of the criteria by which it may be judged accurately, that is, according to how well it adapts to the community, not in terms of how well the community adapts to it.

The present classification method utilizes four broad headings, two designating project function, and two, project location: management and planning; community services; family support services; and home-centered services.

A. Management and Planning

i. Directors and Boards:

By regulation each group of municipalities participating in preventive social services must hire a director and is encouraged to establish a board or committee answerable to the elected council to assist in planning, development, assessment, and administration. Until 1973, the director had to be a full-time employee; as of this year the position may be part-time.

ii. Research:

Assessment of community needs, cost of proposed programs, effectiveness of existing programs, and alternative approaches form an integral part of orderly development. Accordingly, research plays a significant role. Usually, research costs are incorporated within other program budgets and consequently are not clearly identified for purposes of detailed analysis. In Table 2 the amount attributed to research represents only those projects whose sole purpose was research of a specific nature, rather than those instances where research was only one component of the total project.

B. Community Services

i. Drop-In Centres:

These are meeting and socializing places primarily for senior citizens. In addition to unstructured activities they often provide medical, legal, health and other specialized services and information.

ii. Neighborhood Services:

Now more commonly known as community resource centres or "social service supermarkets", they bring together under one roof several government departments and private agencies to provide more efficient service delivery.

iii. Information and Referral:

Advice, information, and direction centres provide a centralized information service designed to assist citizens in the immediate identification of agencies that are appropriate to their needs. In addition to identifying gaps in existing services, thereby facilitating the planning function, they also on occasion take on an advocacy role intended to improve both the intensity of service and its effectiveness.

iv. Volunteer Bureaus:

These recruit, train, and deploy volunteers of all ages to a wide variety of agencies and individuals.

v. Hostels and Drug Programs:

From 1970 to 1972, before other government departments were adequately geared to care for the transient youth population, a few youth hostels providing temporary accommodation, and some drug information and treatment centres, were funded under preventive social services. Such programs now are offered through the federal office of the secretary of state, the department of culture, youth and recreation, and a number of other auspices.

C. Family Support Services

i. Day Care:

This provides out-of-the home care and supervision of young children for all or part of the day in either a group or home setting. Programs are also designed for school-age children before school starts at noon, and after school closes each day. Centres funded under PSS cater primarily to children of working parents, single parents, and parents suffering severe emotional or physical stress.

ii. Counselling Services:

These assist individuals and/or families to maximize their ability to function within the family, on the job, and socially.

iii. Family Planning:

Information is offered to persons over the age of 18 to help them in spacing and determining the number of children they will have. Routine pap tests for cervical cancer are administered to female clients. Fertility information is also available for childless couples.

iv. Parent-Child Development:

These projects provide emotional, intellectual, cultural, and physical growth opportunities on a part-day basis for pre-school-age children. Opportunity is provided for parents to plan the program and increase their knowledge of child growth and development.

v. Family Life Education:

This aims at developing and promoting healthy individual growth and positive family development through small groups, discussions, lectures, and other methods.

D. Home-Centered Services

i. Home Care:

These are home-centered services provided by a variety of community-based agencies through a co-ordinated delivery system which permits people to remain at home rather than be institutionalized. It also allows for earlier discharge of patients from institutions, thereby increasing bed turn-over and utilization. Included are visiting nurses, homemakers, and meals-on-wheels.

ii. Homemaker and Homevisitor:

The former offers substitute mother care when the mother is absent from the home for short periods (usually less than three weeks) due to illness, etc. The latter assists women with marginal skills to upgrade child care, home management, and budgeting.

iii. Meals-On-Wheels:

Provides nourishing meals for senior citizens and others who by reason of infirmity are unable to cook for themselves adequately but otherwise can maintain themselves at home.

It can be seen from the above that some projects by their very nature are more expensive than others. Thus, the percentage of funds allocated to any given one should not be construed as the relative priority assigned to it. Vesting the primary decision-making role in municipal councils complicates the ability of the province to determine project priority and encourage the development of specific approaches. Indeed, to engage in the latter would strike at the very core of the philosophical base upon which the program rests and pave the way for the elimination of citizen participation in planning and development.

II

STATISTICAL TRENDS IN THE DEVELOPMENT OF PREVENTIVE SOCIAL SERVICE PROGRAMS-

As Table 1 indicates, number of people served by preventive social service (PSS) projects has increased considerably since fiscal year 1967-68, the first full year of operation. Thus while 64.1 per cent of the provincial population lived in areas with PSS projects in 1967, 71.8 per cent had potential access to some aspect of the services financed by the program in 1973. During this period the size of the PSS population increased 27.7 per cent, while that of the province as a whole increased 14.0 per cent. The geographical coverage of the program has in-

creased, both through expansion of original PSS areas and through creation of new ones. Because the type of projects established in any given area has been treated largely as a local concern, PSS areas vary considerably with regard to the local mix of PSS — financed activities.

The relative size of expenditures on the various types of PSS projects has remained fairly constant since 1967-68. As can be seen in Table 2, family support services have been assigned the largest portion

of the provincial allocation throughout the history of the program. The fraction of the allocation set aside for family support services has increased by 18.6 percentage points between 1967-68 and 1972-73 while the fraction for home-centered services has declined by 15.1 percentage points. Because of large yearly increases in the PSS budget, these changes indicate differences in the rate at which allocations to these two program-types have been increased, rather than any decrease in amount for home-centered services.

As Tables 3 and 4 indicate, there has always been a rough agreement between the population of PSS areas and the percentage of the provincial allocation assigned to them. This agreement has increased as rural PSS areas have received a larger share of the allocation, offsetting the early "over-representation" of Edmonton and Calgary. As was stated earlier, the PSS program does not have a policy requiring that funds be distributed to areas on the basis of the relative size of their populations.

Because the program finances local projects on the basis of a deficit system, provincial appropriations have always exceeded actual expenditures. This is illustrated by Table 5.

Public and Private Projects

Most PSS projects are of two types: those operated directly by the local council and the local PSS director, and those controlled by an elected board answerable to the local council. The latter are known as private projects, while the former type are often termed public projects because they are under direct municipal control. A comparison of the proportions of the provincial allocation designated for these two types of programs thus provides a crude index of the extent to which volunteers rather than municipal authorities exercise decision-making authority in the PSS program at the local level.

Some trends are apparent in data regarding the proportion of area allocations designated for public and private projects. As can be seen from Table 7, the proportion of area budgets set aside for the PSS

director's office has declined somewhat, doubtless in reflection of the rapid growth of other project types in comparison to the administrative costs of the directors' offices. The proportion of area allocations absorbed by the director's office is relatively low in Edmonton and Calgary (5-10 per cent), and relatively high elsewhere (30-35 per cent). The reason for this disparity is not clear, although it probably relates to "advantages of scale" associated with project control in the larger centres.

There has been no discernible trend in the public-private project ratio in the province as a whole where allocations for directors' offices are excluded from consideration. The percentage of area allocations for public projects increased from 19.64 per cent in 1967-68 to 23.07 per cent in 1972-73. Over the same period, the percentage set aside for private projects also underwent a slight but insignificant increase, from 61.03 per cent to 62.64 per cent. The fact that allocations for private projects have been consistently greater than allocations for public projects appears to be more significant than any other comparison which can be made in Table 7. A tentative conclusion can therefore be drawn that the PSS program favors projects encouraging volunteer participation in decision-making.

Some trends are evident in allocations for the two large urban areas in comparison to the other PSS areas. Initially, in the fiscal year 1967-68, Edmonton and Calgary had quite different proportions of provincial funds allocated to public and private projects. The percentage for public projects in the two cities was considerably higher than in the other areas, a difference which has persisted throughout the six-year period.

Edmonton's public project allocation subsequently increased until it exceeded that of Calgary in 1972-73. Since this change occurred while total allocations were also increasing rapidly it probably should not be ascribed much significance.

TABLE 1

**POPULATION INCLUDED IN PREVENTIVE SOCIAL
SERVICE AREAS, BY FISCAL YEAR, ALBERTA,
1967/68-1972/73***

Area	1967-68	1968-69	1969-70	1970-71	1971-72	1972-73
Grande Prairie	21,424	21,705	21,890	23,622	24,647	26,535
High Prairie	—	—	3,372	10,052	10,210	11,338
Smoky River	1,503	6,641	6,671	6,673	6,673	6,163
Slave Lake	—	—	150	767	4,359	4,359
Ft. McMurray	4,984	5,943	6,132	6,681	7,348	8,349
Lac la Biche	2,155	5,739	6,027	6,118	6,206	6,157
Westlock	10,297	10,297	10,481	10,624	10,624	10,342
Athabasca	—	8,441	8,463	8,372	8,372	7,960
Barrhead	—	—	—	8,270	8,270	7,832
St. Paul Town	—	3,958	4,051	4,241	4,131	4,187
Grande Cache Town	—	—	—	2,525	3,417	3,580
St. Albert Town	10,243	10,919	10,530	11,800	12,637	15,088
Edmonton City	393,365	410,105	422,418	438,152	450,641	441,530
Leduc	15,837	16,284	16,895	17,256	18,700	19,782
Camrose	17,736	18,139	18,169	17,897	17,897	17,629
Lacombe	—	—	14,003	15,068	15,054	14,997
Red Deer	39,864	40,066	40,049	40,830	40,617	41,040
Wetaskiwin City	—	—	—	6,267	6,267	6,566
Vermilion River	—	10,595	10,595	16,027	16,027	84,682
Wainwright	—	—	—	—	—	7,736
Calgary City	354,856	369,025	385,436	403,319	412,777	424,787
Banff Town	—	—	—	—	—	3,400
Blairmore	—	9,574	9,632	12,868	12,868	13,021
Claresholm Town	—	—	—	—	—	3,200
Coaldale	—	—	—	26,778	26,798	26,236
Lethbridge City	37,760	38,749	39,552	40,856	41,808	42,816
Medicine Hat City	25,574	25,713	25,713	25,713	26,228	27,430
TOTAL	935,795	1,011,165	1,060,229	1,161,136	1,192,927	1,195,273

*The population figures for this table have been obtained from a variety of sources:

Year	Unit	Source
1967-70, 1972-73	Cities, town, villages	Estimates calculated by local authorities and compiled by municipal affairs (Xerox)
1967-1973	Counties, Municipal Districts and Improvement Districts	Local population estimates compiled by municipal affairs (Xerox)
1967-73	Metis Colonies	Census conducted by the metis rehabilitation branch, health and social development (Xerox)
1971	Incorporated cities, towns, and villages	Alberta Bureau of Statistics "Population of Incorporated Cities, Towns, and Villages", as contained Alberta Business Trends (Alberta Bureau of Statistics, Edmonton, 1972) pp. 12-16
1967, 1971	Parts of Improvement Districts 17 and 18	Statistics Canada data contained in maps showing 1966 and 1971 population by township for Alberta (surveys branch, highways and transport).

Dashes indicate years prior to the establishment of PSS agreements with any governmental unit in the area.

TABLE 2

**PROVINCIAL APPROPRIATIONS FOR PREVENTIVE SOCIAL SERVICE
PROGRAM TYPES, BY FISCAL YEAR, ALBERTA, 1967/68-1972/73***

Program Type	1967-68	1968-69	1969-70	1970-71	1971-72	1972-73
Management and Planning						
Directors and Boards	19.32%	16.75	14.39	14.87	15.59	18.31
Research	0.95	1.55	—	0.23	0.10	—
%	20.27	18.30	14.39	15.10	15.69	18.31
Amount	\$162,160	237,900	259,020	347,300	376,560	584,638
Community Services						
Drop-In Centers	—	0.33	0.74	2.90	2.90	3.10
Neighborhood Services	6.92	7.59	3.06	3.62	3.82	3.92
Information and Referral	3.43	2.12	1.72	1.54	1.76	2.00
Volunteer Bureau	1.09	0.78	0.58	0.82	0.92	0.78
Hostels and Drug Programs	—	—	—	2.05	0.90	—
%	11.44	10.82	6.10	10.93	9.31	9.80
Amount	\$ 91,520	140,660	109,800	251,390	223,440	312,914
Family Support Services						
Day Care	11.84	25.21	29.18	26.20	25.88	31.22
Counselling	20.00	16.44	23.72	24.06	23.16	18.92
Family Planning	—	0.18	0.89	0.76	0.96	0.77
Parent/Child Development	6.95	4.68	5.37	6.61	7.11	7.01
Family Life Education	3.78	3.97	3.73	3.50	3.65	3.29
%	42.57	50.48	62.89	61.13	60.76	61.21
Amount	\$304,560	656,240	1,132,020	1,405,990	1,458,240	1,954,435
Home-Centered Services						
Home Care	—	—	—	—	—	—
Homemaker/Home Visitor	25.73	20.38	15.70	13.38	12.47	10.61
Meals-On-Wheels	—	—	—	0.38	0.66	0.88
%	25.73	20.38	15.70	13.76	13.13	11.49
Amount	\$205,840	264,940	282,600	316,480	315,120	366,876
TOTAL %	100.0	99.9	99.1	100.9	98.9	100.8
TOTAL Amount	\$800,000	1,300,000	1,800,000	2,300,000	2,400,000	3,193,000

*Data obtained from preventive social service, health and social development.

TABLE 3

**PERCENTAGE OF PROVINCIAL APPROPRIATION ALLOCATED TO SELECTED
PREVENTIVE SOCIAL SERVICE AREAS, BY FISCAL YEAR, ALBERTA,
1967/68-1972/73***

Area	1967-68	1968-69	1969-70	1970-71	1971-72	1972-73
Calgary	36.25	25.87	34.50	30.20	29.16	29.65
Edmonton	33.61	45.92	35.31	35.39	36.23	35.37
Lethbridge	8.71	2.74	4.41	5.47	3.86	3.73
Medicine Hat	6.20	4.62	4.80	4.98	5.10	4.99
Red Deer	5.02	4.29	3.48	2.75	3.05	3.52
Camrose	0.84	2.18	1.87	1.24	1.66	1.71
Grande Prairie	0.90	1.33	1.83	2.41	2.33	2.41
Vermilion River	—	0.44	1.22	1.27	1.16	0.84
Rest of Province	8.47	12.61	11.58	16.29	17.45	17.78
TOTAL %	100.00	100.00	100.00	100.00	100.00	100.00
TOTAL Amount	800,000	1,300,000	1,800,000	2,300,000	2,400,000	3,193,000

* Source: preventive social service, health and social development.

TABLE 4

**PERCENTAGE OF PSS SERVED POPULATION LOCATED IN SELECTED
PREVENTIVE SOCIAL SERVICE AREAS, BY FISCAL YEAR, ALBERTA,
1967/68-1972/73***

Area	1967-68	1968-69	1969-70	1970-71	1971-72	1972-73
Calgary City	37.9%	36.5	36.4	34.7	34.6	35.5
Edmonton City	42.1	40.6	39.9	37.7	37.7	36.9
Lethbridge City	4.0	3.8	3.7	3.5	3.5	3.5
Medicine Hat City	2.7	2.5	2.4	2.2	2.1	2.2
Red Deer, County 23	4.2	3.9	3.8	3.5	3.4	3.4
Camrose, County 22	1.9	1.8	1.7	1.5	1.5	1.4
Grande Prairie, County 1	2.2	2.1	2.0	2.0	2.0	2.2
Vermilion, County 24	—	1.0	1.0	1.3	1.3	0.4
Other Areas	5.0	7.8	9.1	13.6	13.9	14.5
TOTAL %	100.0	100.0	100.0	100.0	100.0	100.0
TOTAL Area Population	935,796	1,009,501	1,058,565	1,161,136	1,192,927	1,195,273

* Data obtained from the Alberta Bureau of Statistics, Alberta municipal affairs, metis rehabilitation, and health and social development.

PSS — Preventive Social Service

TABLE 5

**PROVINCIAL EXPENDITURES COMPARED TO PROVINCIAL
APPROPRIATIONS FOR PREVENTIVE SOCIAL SERVICES,
BY FISCAL YEAR, ALBERTA
1967/68-1972/73***

Fiscal Year	Appropriation	Expenditure	Expenditures as % of Appropriations
1967-68	800,000.00	575,158.74	71.89
1968-69	1,300,000.00	1,022,094.04	78.62
1969-70	1,800,000.00	1,374,831.64	76.37
1970-71	2,300,000.00	1,915,609.97	83.28
1971-72	2,400,000.00	2,284,822.81	95.20
1972-73	3,193,000.00	2,771,481.50	86.79

* Source: preventive social service, health and social development

**TABLE 6 INCORPORATED COMMUNITIES AND OTHER LOCAL AUTHORITIES
COMPRISING PREVENTIVE SOCIAL SERVICE AREAS,
ALBERTA, 1973-74**

PSS Area	Composition
Grande Prairie	County 1, City of Grande Prairie, Beaverlodge, Hythe, Sexsmith, Wembley
High Prairie	Improvement District 17 (part), High Prairie, Kinuso, Slave Lake, Big Prairie Metis Colony, East Prairie Metis Colony, Gift Lake Metis Colony
Smoky River	Smoky River Municipal District 130, Donnelly, Fahler Girouxville, McLennan
Slave Lake	Improvement District 17 (part)
Ft. McMurray	Improvement District 18, Ft. McMurray
Lac la Biche	Improvement District 18 (part), Caslan Metis Colony, Kikino Metis Colony, Lac la Biche, Plamondon
Westlock	Municipal District 92, Westlock
Athabasca	County 12, Athabasca, Boyle
Barrhead	County 11, Barrhead
St. Paul	Town of St. Paul
Grande Cache	Town of Grande Cache
St. Albert	Town of St. Albert
Edmonton	City of Edmonton
Leduc	County 25, Breton, Calmar, Devon, Leduc, New Sarepta, Thorsby, Warburg
Camrose	County 22, Bashaw, Bawlf, Camrose
Lacombe	County 14, Alix, Bentley, Blackfalds, Clive, Eckville, Lacombe, Mirror
Red Deer	County 23, Elnora, City of Red Deer
Wetaskiwin	City of Wetaskiwin
Vermilion River	Kitscoty, City of Lloydminster, Marwayne, Paradise Valley, Vermilion
Wainwright	Town of Wainwright
Calgary	City of Calgary
Banff	Town of Banff
Blairmore	Municipal District 9, Improvement District 5, Bellevue, Blairmore, Coleman, Cowley, Frank, Pincher Creek
Claresholm	Town of Claresholm
Coaldale	Municipal District 14, County 26, Barons, Coaldale, Grassy Lake, Nobleford, Picture Butte, Taber, Vauxhall
Lethbridge	City of Lethbridge
Medicine Hat	City of Medicine Hat

TABLE 7

**PROPORTION OF PROVINCIAL APPROPRIATION DESIGNATED FOR PUBLIC AND PRIVATE
PSS PROJECTS BY FISCAL YEAR FOR EDMONTON, CALGARY, AND OTHER PSS AREAS,
ALBERTA,
1967/68-1972/73**

Expenditure Category	1967-68			1968-69			1969-70		
	Calgary	Edmonton	Other	Calgary	Edmonton	Other	Calgary	Edmonton	Other
Director									
%	9.68	8.12	43.40	12.09	3.85	42.00	6.81	4.21	34.94
Amount	23,711.20	18,428.00	88,372.50	38,226.40	21,634.82	144,808.61	41,508.80	26,288.00	186,290.42
Public Projects									
%	38.15	13.06	4.72	39.58	43.29	5.77	54.05	40.66	9.82
Amount	93,412.26	29,653.80	9,609.00	125,158.40	242,982.28	19,882.00	329,338.96	253,613.73	52,342.30
Private Projects									
%	52.17	78.82	51.88	48.34	52.86	52.23	39.14	55.13	55.24
Amount	127,709.42	178,919.02	105,645.73	152,855.06	296,611.36	180,091.48	238,446.94	343,834.77	294,562.62
TOTAL %	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
TOTAL Amount	699,578.98	819,944.59	797,169.56	754,854.34	942,104.09	892,510.52	951,057.63	1,134,360.67	1,122,034.42

	1970-71			1971-72			1972-73		
Director									
%	6.64	4.97	32.27	7.30	4.57	33.40	7.63	4.02	30.30
Amount	46,458.40	40,785.60	257,277.79	55,091.20	43,050.40	298,125.83	72,547.20	45,458.73	339,930.70
Public Projects									
%	43.76	38.27	15.45	28.48	36.07	14.88	20.70	33.65	14.38
Amount	306,160.75	313,754.42	123,139.41	214,953.60	339,845.35	132,845.35	196,862.40	381,745.30	161,398.55
Private Projects									
%	49.60	56.76	52.28	64.22	59.36	51.72	71.67	62.33	55.32
Amount	346,959.83	465,404.57	416,752.36	484,809.54	559,207.85	461,539.34	681,648.03	707,006.64	620,705.17
TOTAL %	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
TOTAL Amount	699,578.98	819,944.59	797,169.56	754,854.34	942,104.09	892,510.52	951,057.63	1,134,360.67	1,122,034.42

HIGHLIGHTS OF PUBLIC ASSISTANCE AND CHILD WELFARE STATISTICS

PUBLIC ASSISTANCE

Standardization of Definitions of Reasons for Assistance, and Automatic Computer Edit on Statistical Series

Within the public assistance statistical system, each recipient is assigned to a category as to reason for receiving assistance from the department. The definitions of these reasons for assistance are as follows:

Age (Person 60 or over) — A person may be considered eligible for assistance under this reason if over age 60. Prior to November 1971, women between 55 and 60 years of age were also eligible for Social Allowance by reason of age alone.

Mother with Dependent Child(ren)/Father with Dependent Child(ren) — This reason is applicable to the single parent family where the parent actually has custody of, or is personally caring for a dependent child.

Physical Ill Health — This reason is applicable to a person with a physical disability, impairment, or disease sufficient to prevent him from rendering services for wages which are adequate to meet his needs and those of his dependents, if any, for a period exceeding 90 days.

Mental Ill Health — This reason is applicable to a person with a mental incapacity, impairment, or disease sufficient to prevent him from rendering services for wages which are adequate to meet his needs and those of this dependents, if any, for a period exceeding 90 days.

Employed, Insufficient Income — A person who is employed, but whose earnings are not sufficient to meet his basic needs and those of his dependents, if any. The assessment of insufficient income is made on the basis of benefit rates used in the social allowance program.

Unemployed Employable — This category includes persons who are capable of taking employment, but who are unemployed at the moment. It includes persons who are

- available for part-time or full-time employment.
- unemployed and seeking employment and whose employability may be under assessment.
- temporarily unavailable for work because of educational enrollment, pregnancy, or incarceration of less than 90 days.

Guardian Social Allowance — This is an extension of the social allowance program designed to assist persons who are acting in the capacity of guardians and providing care to children placed in their home by parents who are unable or unwilling to provide for such care.

Prior to March 31, 1973, individual social workers were asked to assign reasons for assistance to recipients on the basis of what they believed to be the "primary" reason causing each recipient to apply for assistance. For example, a person who was both more than 60 years old and physically disabled, could be assigned to either the "age" or "physical ill health" category, depending on the worker's judgment. This method of coding recipients was somewhat less than ideal, as patterns of assignment to assistance categories varied from one social worker to another.

Steps were taken to standardize the assignment of recipients to reason for assistance categories as of March 31, 1973: social workers now are asked to assign the reason for assistance on a specified rank order basis (the order being that given in the definition section above). For example, a 63-year-old, disabled woman with a dependent child, who would have been previously coded as either "age", "physical ill health" or "mother with dependent child", would now consistently be coded as an "age" case because "age" has highest priority in the specified ranking of the reasons for assistance. In short, recipients will be assigned to the first category of reason for assistance that applied to them, proceeding through the list of reasons in their specified order.

As a result of this process, the definition of cases presently in the statistical system was standardized as much as possible. This automatic edit process significantly alters the resulting percentage distribution of caseload by reasons for assistance. Table 1 illustrates the effects of the edit process on the distribution of the caseload as of March 31, 1973. Substantial increases in the percentage of the caseload classified as "age" and "mother with dependent children" balance decreases in the areas of physical and mental ill health, employed with insufficient income and unemployed employables. The additional cases categorized as "age" were primarily drawn from the previous areas of physical and mental ill health. Many of the new cases of mothers with dependent children came from the unemployed with insufficient income, and unemployed employable categories.

Highlights of this Quarter

Table 2 presents the distribution of caseload by reason for assistance for the quarter April to June 1973, and compares the distribution to that of the previous quarter. Average caseload for the quarter was 29,600 households (which includes both families and single person units), a decrease of -0.80 per cent from the previous quarter. The substantial increase in the proportion of the caseload categorized as "age" cases is explained by the automatic standardization of definition process rather than any real change in the caseload composition. The two right-hand columns of Table 1 indicate the amount of change between quarters resulting from the automatic standardization process, and the amount of "real" change which results if we control for the effects of the standardization process. Therefore, actual caseload shifts during the quarter April to June 1973 include:

- a continuing increase in the proportion of the caseload constituted by mothers with dependent children (+1.1 per cent);
- a moderate increase in the caseload proportion accounted for by mental ill health cases (+0.5 per cent), physical ill health (+0.2 per cent), and fathers with dependent children (+0.1 per cent).
- a slight decrease in the proportion of the caseload constituted by unemployed employables (-1.3 per cent), age (-0.4 per cent), and employed with insufficient income cases (-0.2 per cent).

As we are still in the process of standardizing definitions within the series of this quarter, readers are requested to view the above changes as preliminary.

Table 3 indicates the age-sex distribution of the caseload for the quarter. The proportion of the total caseload constituted by males decreased from 37.8 per cent in the previous quarter to 36.4 per cent, the

decrease being particularly evident within the age groups between 20 and 34. For example, the number of male clients aged 20 to 24 decreased from 949 to 861; the number aged 25 to 29, from 915 to 829; the number aged 30 to 34, from 750 to 691. In contrast, the number of female clients in each of these age groups increased.

The pattern of distribution of the caseload over the province is indicated in Table 4. As usual, the Edmonton and Calgary regional office caseloads are the highest for the province (37.8 per cent and 23.3 per cent, respectively). Twenty-two out of the 36 regional offices exhibited a decrease in caseload from the previous quarter, with Grande Cache (-15.1 per cent), Whitecourt (-14.6 per cent), and High Level (-11.1 per cent) showing the largest decreases. The highest rates of increase occurred for the regional offices of Slave Lake (13.4 per cent), Rocky Mountain House (4.8 per cent), and Vermilion (4.4 per cent). Overall ranking of regional offices by their proportion of the total caseload changed very little from the previous quarter.

Analysis of the occupational distribution of persons receiving social allowance revealed little change from the previous quarter.

Municipal Caseload Statistics

Table 5 presents municipal caseload statistics¹ for the quarter January to March 1973. Incomplete returns to date preclude presentation of municipal statistics for the quarter April to June 1973 in this issue of the Quarterly Statistical Review. The 10 cities in the province accounted for 94.72 per cent of the provincial caseload, an increase of 1.11 per cent from the previous quarter. Edmonton and Calgary together represented 90.65 per cent of the caseload.

1. For additional information concerning the municipal caseload, please refer to the glossary which appears at the end of this review.

TABLE 1
EFFECT OF STANDARDIZATION OF REASON FOR ASSISTANCE
DEFINITIONS, MARCH 31, 1973

Reason for Assistance	Before Standardization of Definitions		After Standardization of Definitions		Percentage Difference
	#	%	#	%	
Age	4465	15.0	6559	22.0	+ 7.0
Physical Ill Health	7353	24.6	5380	18.0	- 6.6
Mental Ill Health	2442	8.2	2211	7.4	- 0.8
Mother with Dependent Children	10010	33.5	11293	37.8	+ 4.3
Father with Dependent Children	143	0.5	212	0.7	+ 0.2
Employed, Insufficient Income	1379	4.6	768	2.6	- 2.0
Unemployed Employables	4075	13.6	3444	11.5	- 2.1
TOTAL	29876	100.0	29867	100.0	—

TABLE 2

**DISTRIBUTION OF CASELOAD BY REASON FOR ASSISTANCE
FOR THE QUARTER APRIL-JUNE 1973**

Reason for Assistance	Percentage Change Between Quarters									
	April	May	June	Quarterly Average April-June 1973		Last Quarter's Average Jan-March 1973		Total Change	Change Owing to Standardization of Definitions	Actual Change
Age	6426	6262	6151	6280	21.2	4365	14.6	+6.6	+7.0	-0.4
Physical Ill Health	5402	5422	5490	5438	18.4	7413	24.8	-6.4	-6.6	+0.2
Mental Ill Health	2256	2307	2344	2302	7.8	2424	8.1	-0.3	-0.8	+0.5
Mother with Dependent Children	11341	11325	11352	11339	38.3	9827	32.9	+5.4	+4.3	+1.1
Father with Dependent Children	249	233	222	235	0.8	135	0.5	+0.3	+0.2	+0.1
Employed, Insufficient Income	765	779	750	765	2.6	1423	4.8	-2.2	-2.0	-0.2
Unemployed Employables	3447	3264	3013	3241	10.9	4251	14.3	-3.4	-2.1	-1.3
TOTAL	29886	29592	29322	29600	100.0	29838	100.0	—	—	—
Increase Rate over Previous Month	0.52	-0.98	-0.91							
Increase Rate over Previous Quarter										-0.80

TABLE 3

**AGE-SEX DISTRIBUTION OF CASELOAD FOR THE
QUARTER APRIL-JUNE 1973***

Age Group	Males		Females		Both Sexes	
	#	%	#	%	#	%
0-19	447	1.5	1143	3.9	1590	5.4
20-24	861	2.9	2462	8.3	3323	11.2
25-29	829	2.8	2431	8.2	3260	11.0
30-34	691	2.3	2038	6.9	2729	9.2
35-39	720	2.4	1784	6.0	2504	8.5
40-44	823	2.8	1651	5.6	2474	8.4
45-49	885	3.0	1427	4.8	2312	7.8
50-54	891	3.0	1391	4.7	2282	7.7
55-59	1129	3.8	1449	4.9	2578	8.7
60-64	1720	5.8	1806	6.1	3526	11.9
65+	1794	6.1	1228	4.2	3022	10.2
TOTAL	10790	36.4	18810	63.6	29600	100.0

* Figures do not include Guardian Social Allowance cases.

TABLE 4

REGIONAL DISTRIBUTION OF CASELOAD*

Regional Office	Quarterly Average April - June 1973		Last Quarter's Average Jan. - March 1973		% Rate of Increase over Last Quarter	Ranks	
						This Quarter	Last Quarter
Edmonton North	4867	16.1	4908	16.1	— 0.8	1	1
Calgary South	4612	15.2	4631	15.2	— 0.4	2	2
Calgary North	3261	10.8	3247	10.6	— 0.4	3	3
Edmonton West	3230	10.7	3243	10.6	— 0.4	4	4
Edmonton South	2494	8.2	2473	8.1	0.9	5	5
Lethbridge	1514	5.0	1587	5.2	— 4.6	6	6
Grande Prairie	920	3.0	914	3.0	0.7	7	7
Edmonton West 10	848	2.8	872	2.9	— 2.8	8	9
Red Deer	843	2.8	886	2.9	— 4.9	9	8
Wetaskiwin	783	2.6	785	2.6	— 0.3	10	10
Medicine Hat	607	2.0	609	2.0	— 0.3	11	11
High Prairie	487	1.6	475	1.5	2.5	12	12
Barrhead	421	1.4	436	1.4	— 3.4	13	13
Peace River	396	1.3	408	1.3	— 2.9	14	14
Lac la Biche	394	1.3	387	1.3	1.8	15	15
Vegreville	373	1.2	373	1.2	0.0	16	16
Bonnyville	325	1.1	343	1.1	— 5.3	17	17
St. Paul	307	1.0	321	1.0	— 4.4	18	18
Edson	305	1.0	300	1.0	— 1.7	19	19
Slave Lake	288	1.0	254	0.8	13.4	20	23
Vermilion	286	0.9	274	0.9	4.4	21	21
Drumheller	285	0.9	296	1.0	— 3.7	22	20
Camrose	254	0.8	265	0.9	— 4.2	23	22
Smoky Lake	246	0.8	242	0.8	1.7	24	25
Wainwright	233	0.8	244	0.8	— 4.5	25	24
Blairmore	223	0.7	233	0.8	— 4.3	26	26
Athabasca	222	0.7	220	0.7	0.9	27	27
McMurray	210	0.7	203	0.7	3.4	28	29
Stettler	193	0.6	203	0.7	— 4.9	29	29
Rocky Mountain House	173	0.6	165	0.5	4.8	30	31
High Level	168	0.6	189	0.6	— 11.1	31	30
Olds	157	0.5	157	0.5	0.0	32	32
Brooks	120	0.4	117	0.4	2.6	33	34
Whitcourt	111	0.4	130	0.4	— 14.6	34	33
Hanna	82	0.3	83	0.3	— 1.2	35	35
Grande Cache	45	0.2	53	0.2	— 15.1	36	36
TOTAL	30283	100.0	30526	100.0			

* Includes Guardian Social Allowance Cases.

TABLE 5

MUNICIPAL PUBLIC ASSISTANCE CASELOAD
JANUARY - MARCH 1973

Municipality	Quarterly Average Jan.-March 1973		Last Quarter's Average October-December 1972	
	#	%	#	%
Cities:				
Calgary	1516	54.06	1387	53.72
Camrose	3	0.11	6	0.23
Drumheller	8	0.29	8	0.31
Edmonton	1026	36.59	939	36.37
Grande Prairie	2	0.07	2	0.08
Lethbridge	53	1.89	42	1.62
Lloydminster	1	0.04	0	0.00
Medicine Hat	22	0.78	18	0.70
Red Deer	25	0.89	15	0.58
Wetaskiwin	0	0.00	0	0.00
Total Cities	2656	94.72	2417	93.61
Towns	48	1.71	56	2.17
Villages	7	0.25	5	0.19
Counties	61	2.18	71	2.75
M.D.s	32	1.14	33	1.28
TOTAL	2804	100.00	2582	100.00

CHILD WELFARE

Table 1A presents the distribution of children under care of the department, by status, for April to June 1973. In comparison with the previous quarter, the total number of children in care (5,740) has increased slightly (+0.33 per cent). No substantial changes are noticeable in the distribution of these children among the various status categories: approximately one-half of the children (52.5 per cent) were permanent wards, another one-third (35.9 per cent) were temporary wards, and the remaining 11.5 per cent were either non-wards, or out-of-province wards.

Table 2A indicates the distribution of children under care by type of placement. More than one-half of the children (58.0 per cent) have been placed in foster homes, 12.7 per cent have been placed for adoption, 13.5 per cent are in institutions, and 8.0 per cent are living with their parents. There were no substantial shifts in the placement of children since the previous quarter.

The age-sex distribution of children under care, shown in Table 3A, is biased towards the older age groups because of the inclusion of 1,381 probation cases (concentrated on the ages 12 to 18 years) who were excluded from the previous calculations in this article. Male children constitute 61.02 per cent of the total; female children, 38.98 per cent.

Figure 1A illustrates shifts over the last thirteen quarters in the percentage distribution of children under care by racial origin. The most striking change is the increase in the percentage of the caseload constituted by treaty and non-treaty Indian children (from 7.9 per cent in April 1970 to 17.2 per cent in June 1973). During the same time period, the Caucasian and Metis caseloads declined from 62.0 per cent and 27.5 per cent, to 58.7 per cent and 22.4 per cent of the total caseload, respectively. As the figures used for the construction of this graph include probation cases, the apparent increase in the proportion of the caseload accounted for by treaty

and non-treaty Indians is at least partly attributable to the transfer of responsibility for juvenile delinquents from the attorney-general's department to child welfare in the fall of 1970. It should be noted, however, that while the native Indian population accounts for less than five per cent of the total Alberta population, it contributes almost 20 per cent of the child welfare caseload. If Metis children were included in these figures, the discrepancy would be even greater.

Figure 2A illustrates child welfare data concerning another area of current interest — the trend in the number of illegitimate infants surrendered by their mothers into the care of the director of child welfare. The number of registered illegitimate births in the province steadily increased from 2,436 in 1962 to a peak of 4,146 in 1970, and then sharply declined to 3,050 during 1972. This demonstrated decline in the number of illegitimate births can be linked to the new legislation concerning therapeutic abortions. Examining the number of surrenders of infants to the department, a corresponding increase between 1962 and 1970 (from 876 surrenders to 1,284), and a sharp decline to 1972 (717 surrenders), is evident. However, the percentage of illegitimate infants surrendered to child welfare has decreased throughout the ten-year time period (from 40.0 per cent in 1962 to 23.5 per cent in 1972). Preliminary 1973 figures indicate a further decline in this index. Although it is difficult to draw any firm conclusions from the data presented, it appears that despite the absolute decline in the number of illegitimate births in Alberta, the percentage of infants being surrendered to the department is also decreasing. This trend accounts partly for the decline in the number of permanent wards available for adoption.¹

1. For further information on the decline in the number of permanent wards available for adoption refer to the Quarterly Statistical Review for January-March 1973.

TABLE 1A

STATUS OF CHILDREN UNDER CARE FOR APRIL-JUNE 1973

Type of Ward	April	May	June	Quarterly Average April-June 1973		Last Quarter's Average Jan.-March 1973		Percentage Change Between Quarters
				#	%	#	%	
Temporary C.W.A.	1685	1671	1658	1671	29.1	1679	29.3	-0.2
Permanent C.W.A.	2277	2297	2279	2284	39.8	2294	40.1	-0.3
View to Adoption	698	761	729	729	12.7	740	12.9	-0.2
Temporary J.D.A.	388	392	398	393	6.8	381	6.7	0.1
Non-Ward	459	503	469	477	8.3	441	7.7	0.6
Out of Province	185	186	188	186	3.3	186	3.3	0.0
TOTAL	5692	5810	5721	5740	100.0	5721	100.0	—
Increase Rate over Previous Month	-0.49	+2.07	-1.53	+0.33				
Increase Rate over Previous Quarter								

C.W.A. — Child Welfare Act

J.D.A. — Juvenile Delinquency Act

TABLE 2A

DISTRIBUTION OF CHILDREN UNDER CARE BY STATUS AND TYPE OF PLACEMENT
FOR THE QUARTER APRIL-JUNE 1973

Type of Placement	Temporary Ward (C.W.A.)		Permanent Ward (C.W.A.)		Non-Ward		Out of Province		Temporary Ward (J.D.A.)		TOTAL	
	#	%	#	%	#	%	#	%	#	%	#	%
Free Home	21	1.3	20	0.7	1	0.2	2	1.1	4	1.0	48	0.8
Foster Home	1129	67.6	1750	58.3	259	54.5	133	71.1	54	13.8	3325	58.1
Institution — Treatment	72	4.3	91	3.0	48	10.1	2	1.1	94	24.0	307	5.4
— Correctional	—	0.0	4	0.1	—	0.0	1	0.5	4	1.0	9	0.2
— Receiving	107	6.4	77	2.6	37	7.8	2	1.1	8	2.0	231	4.0
Mental Defective in A.S.H.	13	0.8	73	2.4	9	1.9	5	2.6	4	1.0	102	1.8
Other Institution	15	0.9	83	2.8	18	3.8	3	1.6	2	0.5	121	2.1
Independent	1	0.1	17	0.6	2	0.4	2	1.1	4	1.0	28	0.5
View to Adoption	—	—	719	23.9	—	—	11	5.9	—	—	730	12.7
Run Away	28	1.7	31	1.0	10	2.1	1	0.5	23	5.9	93	1.6
With own Parents	228	13.6	24	0.8	55	11.6	10	5.3	139	35.5	456	8.0
Group Home	35	2.1	90	3.0	35	7.4	2	1.1	46	11.7	208	3.6
With Relatives	20	1.2	24	0.8	1	0.2	13	7.0	10	2.6	68	1.2
TOTAL	1669	100.0	3003	100.0	475	100.0	187	100.0	392	100.0	5726	100.0

A.S.H. — Alberta School Hospital

C.W.A. — Child Welfare Act

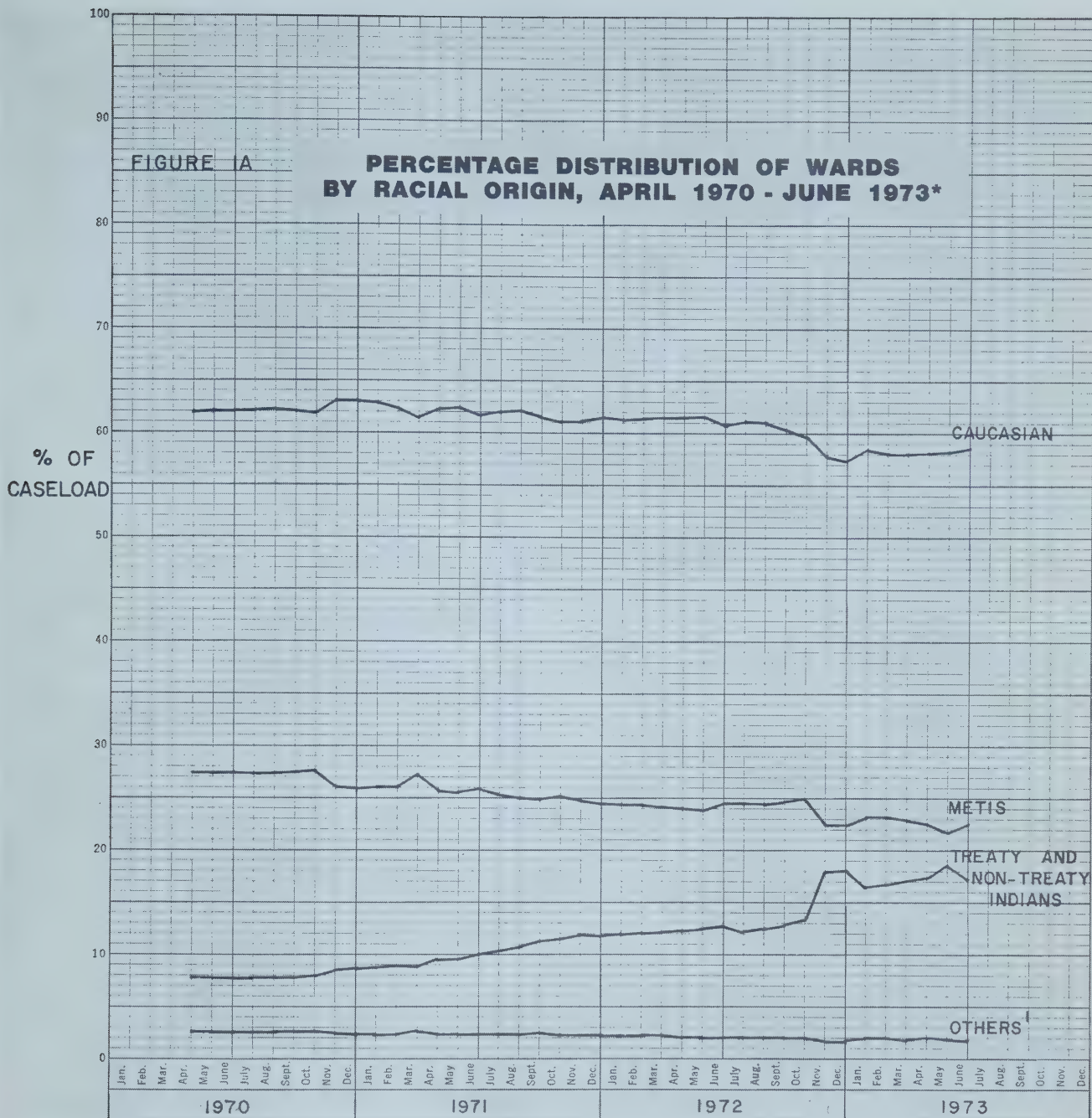
J.D.A. — Juvenile Delinquency Act

TABLE 3A

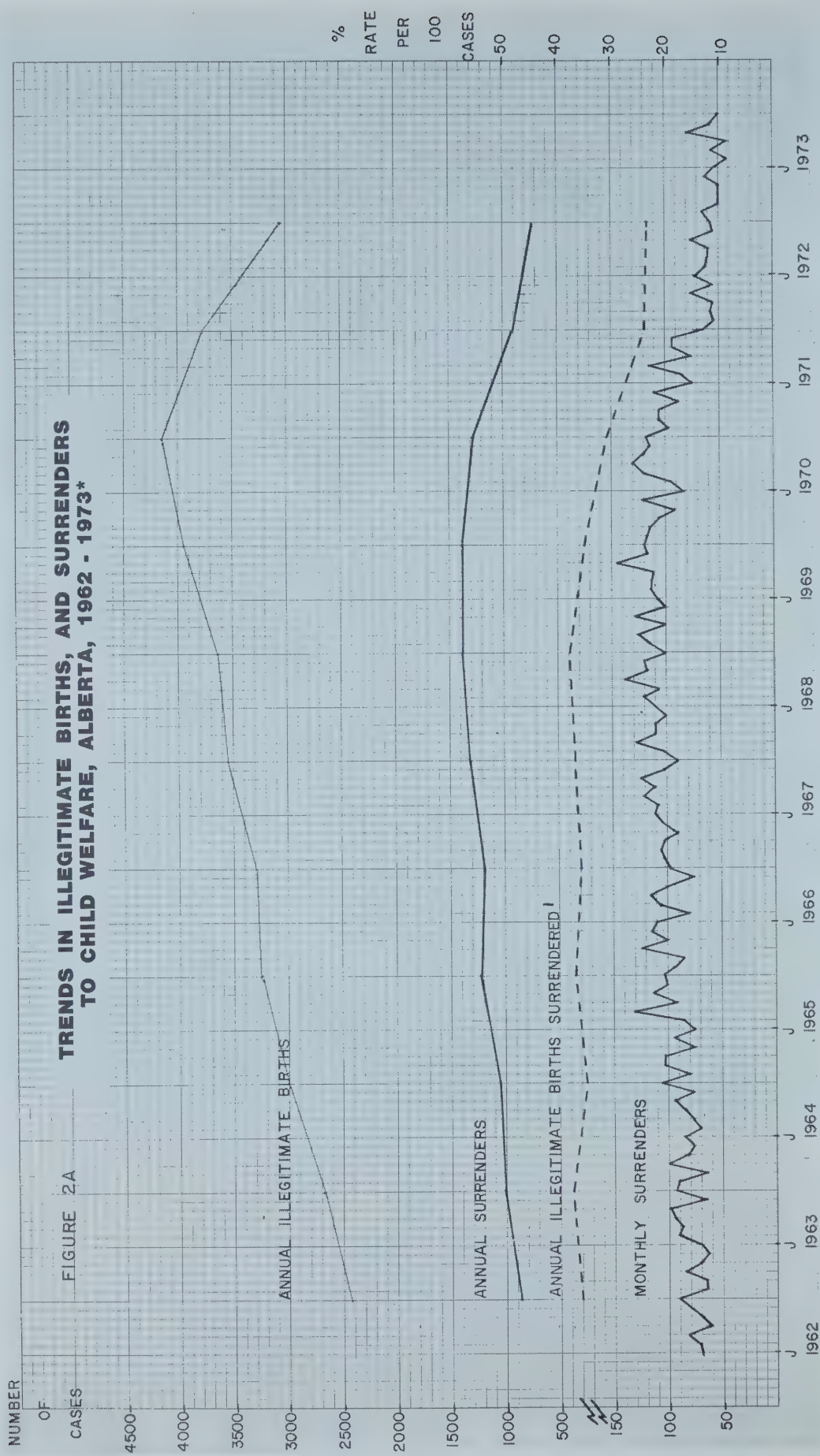
AGE-SEX DISTRIBUTION OF CHILDREN UNDER CARE FOR APRIL-JUNE 1973*

Birth Year	Males		Females		Both Sexes		Range Percentage	
	#	%	#	%	#	%		
1973	348	4.89	303	4.26	651	9.15	approx 0-6 years	28.59%
1972	137	1.92	131	1.84	268	3.77		
1971	126	1.77	96	1.35	222	3.12		
1970	118	1.66	95	1.33	213	2.99		
1969	110	1.54	85	1.19	195	2.74		
1968	129	1.81	92	1.29	221	3.10		
1967	165	2.32	100	1.40	265	3.72	approx 7-12 years	23.98%
1966	154	2.16	112	1.57	266	3.74		
1965	169	2.37	98	1.38	267	3.75		
1964	156	2.19	102	1.43	258	3.62		
1963	153	2.15	104	1.46	257	3.61		
1962	181	2.54	110	1.54	291	4.09		
1961	232	3.26	136	1.91	368	5.17	approx 13+ years	47.43%
1960	367	5.15	176	2.47	543	7.63		
1959	479	6.74	222	3.12	701	9.85		
1958	638	8.96	299	4.20	937	13.16		
1957	449	6.31	283	3.97	732	10.28		
1956	193	2.71	186	2.61	379	5.32		
1955	39	0.55	46	0.66	82	1.19		
TOTAL	4343	61.02	2776	38.98	7119	100.0		

* Note: These tabulations include 1381 probation cases (concentrated in the ages 12 to 18 years).



*DATA USED IN THE CONSTRUCTION OF THIS FIGURE INCLUDES PROBATION CASES SINCE FALL 1970.
 1"OTHERS" INCLUDES: NEGRO, ORIENTAL, EAST INDIAN, ESKIMO AND OTHER.



*THE TOP THREE LINES ARE BASED ON ANNUAL FIGURES, THE BOTTOM LINE ON MONTHLY FIGURES. REFER TO RIGHT-HAND SCALE.

GLOSSARY*

Attenuate — to render less virulent.

Bacillus — any rod shaped bacterium.

Boarding Home — a foster home in which the foster parents receive monetary compensation from the department to cover boarding expenses, clothing, etc. for the ward.

Caseload — the number of households, or units, assisted; these units consisting of one or more persons. Caseload is often used to refer to the collective heads of these units. (See "household head").

Chemotherapy — the treatment of disease by chemical agents.

Child Welfare Act (1970, as amended) — a provincial act under which the welfare of children in the province of Alberta is safeguarded.

Collapse of the lung — an airless or fetal state of all or part of a lung.

Contact — an individual who is known to have been sufficiently near to an infected individual to have been exposed to transfer of infectious material.

Free Home — a foster home in which the foster parents have chosen to receive no monetary compensation from the department for the care of the ward.

Household Head — for census purposes, every household must have a head. This is the husband if both a husband and wife are present, the parent if living with unmarried children, or any member of a group sharing a dwelling equally. A person occupying a dwelling alone is always reported as the head.

Independent Placement — a situation where an older teenage ward is granted independent status by the Director of Child Welfare to live on his own.

Isoniazid — an odorless compound occurring in colorless or white crystals or as a white crystalline powder, used in treatment of tuberculosis.

Juvenile Delinquency Act (1929, as amended) — a federal act which establishes guidelines as to who delinquents are, how they are to be handled, and provides the authority for provincial governments to develop flexible program service.

Labor Force Survey — Statistics Canada operates a monthly sample survey of the Canadian population (sample size is approximately 30,000), covering labor force participation, employment and unemployment. From the results of this sur-

vey, monthly estimates of unemployment are published for regions within the country; the employment figures used within this review have been taken from this source.

Miliary Tuberculosis — an acute form of TB in which minute tubercles are formed in a number of organs of the body, due to dissemination of the bacilli throughout the body by the blood stream.

Municipal Caseload — a municipality is responsible for assisting an employable person who is a resident of the municipality and

- (1) was a resident of the municipality during the twelve months immediately preceding his application, and
- (2) did not, during any part of these twelve months, receive material aid from the province or any other municipality.

The municipality is reimbursed 90% by the province for expenditures incurred.

Non-Ward (now called "custody by agreement") — is a child (under the age of 18) whose parents have entered into an agreement with the director of child welfare for the temporary care of the child; the parents retain guardianship rights. Situations which result in custody by agreement usually involve circumstances such as illness of the parents, or the child, which make care of the child beyond the parents' capabilities.

Open Tuberculosis — tuberculosis in which there are lesions from which the tubercle bacilli are being discharged out of the body.

Permanent Ward — a child (under the age of 18) whose ties with his natural parents have been completely severed and whose sole custodian and guardian is the director of child welfare. Permanent wardship expires at age 18; but until that time, such children are adoptable.

Pulmonary — pertaining to the lungs.

Reasons for Assistance — the social allowance program is available to those persons who lack the resources or income sufficient to meet their needs and those of their dependents. Eligibility for assistance is defined within categories; for each application, the social worker assigns a reason for assistance on a specified rank order basis. That is, recipients are assigned to the first category of reason for assistance that applies to them, proceeding through the list of reasons in their specified order. (See article for ranking).

Recipients — In contrast to the term “caseload”, this term refers to the unit heads plus their dependents. The number of recipients on assistance is approximately two or three times as great as the caseload.

Resection — excision of a considerable portion of an organ or structure.

Streptomycin — an antibiotic substance.

Temporary Ward— children (under the age of 18) who are in custody of the director of child welfare for a temporary period. At the end of this specified period, the temporary wardship is reviewed by the court. Three possible outcomes of this review are:

- a) the wardship may be allowed to lapse;
- b) the wardship may be renewed for another specified period; or
- c) the court may rule to request permanent wardship from a higher court.

Tuberculous meningitis — a severe inflammation of the three membranes that envelop the brain and spinal cord.

Virulence — the degree of ability of a micro-organism to produce disease.

* **Source of medical terms** — Dorland's Illustrated Medical Dictionary 24th Edition Published by W. B. Saunders Co., Philadelphia, 1965.

